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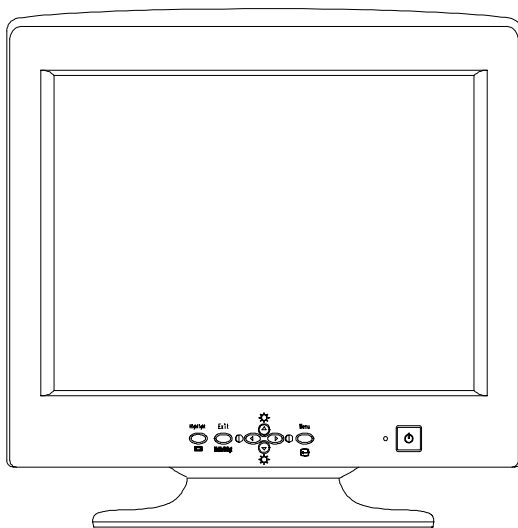
COLOR MONITOR

Chassis
CA19JS

Model
955MB

SERVICE Manual

COLOR MONITOR



CONTENTS

1. Precautions
2. Product Specifications
3. Disassembly & Reassembly
4. Alignment & Adjustments
5. Troubleshooting
6. Exploded View & Parts List
7. Electrical Parts List
8. Block Diagram
9. Wiring Diagram
10. Schematic Diagrams



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1 Precautions

1-1 Safety Precautions

WARNINGS

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power before servicing.
3. When the chassis is operating, semiconductor heatsinks are potential shock hazards.

1-1-1 Servicing the High Voltage and CRT :

1. When servicing the high voltage system, remove the static charge by connecting a 10 kohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead.
2. When troubleshooting a monitor with excess HV, avoid being unnecessarily close to the monitor. Do not operate the monitor for longer than is necessary to locate the cause of excessive voltage.
3. High voltage should always be kept at the rated value (not higher). Only when high voltage is excessive are X-rays capable of penetrating the shell of the CRT, including the lead in glass material. Operation at high voltages may also cause failure of the CRT or high voltage circuitry.
4. When the HV regulator is operating properly, there is no possibility of an X-ray problem. Make sure the HV does not exceed its specified value and that it is regulating correctly.
5. The CRT is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the CRT only with one that is the same or equivalent type as the original.
6. Handle the CRT only when wearing shatterproof goggles and after completely discharging the high voltage anode.
7. Do not lift the CRT by the neck.

1-1-2 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.

3. Leakage Current Hot Check (Figure 1-1):
WARNING: Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (UL Publication UL1410, 59.7).

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

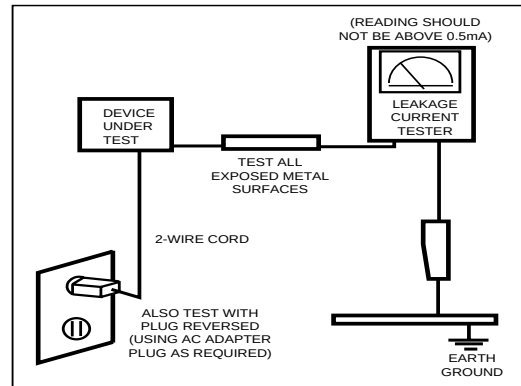


Figure 1-1. Leakage Current Test Circuit

1-1-3 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

Components identified by ☢ on schematics and parts lists must be sealed by a soldering iron after replacement and adjustment.

1-2 Servicing Precautions

WARNING 1: First read the “Safety Precautions” section of this manual. If unforeseen circumstances create conflict between the servicing precautions and safety precautions, always follow the safety precautions.

WARNING 2: A high voltage adjusted to the wrong value may cause excessive X-ray emissions.

WARNING 3: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet, and should be followed closely.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect all test components in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the +B voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.
9.  Indicates ESDs on the Schematic Diagram in this manual.

2 Product Specifications

2-1 Specifications

Item	Description
Picture Tube	19-Inch (48 cm): 18-inch (45.8 cm) viewable, Perfect Flatness , 90° Deflection, Semi- tint, Invar shadow mask, Anti-static silica coating 0.20 mm Dot pitch (Horizontal)
Scanning Frequency	Horizontal : 30 KHz ~ 85 KHz (Automatic) Vertical : 50 Hz ~ 160 Hz (Automatic)
Display Colors	Unlimited colors
Maximum Resolution	Horizontal : 1600 Dots Vertical : 1200 Lines @ 68 Hz
Input Video Signal	Analog, 0.7 Vp-p positive at 75 Ω , internally terminated
Input Sync Signal	Separate H/V Sync, TTL level, positive/negative
Maximum Pixel Clock rate	185 MHz
Active Display	Horizontal : 352mm $\pm$ 3 mm Vertical : 264 mm $\pm$ 3 mm
Input Voltage	AC 90 ~ 264 Volts, 60 Hz / 50 Hz $\pm$ 3 Hz
Power Consumption	110 Watt (max)
Dimensions (W x D x H) Unit/Gross	17.03 x 18.07 x 17.91 Inches (440 x 459 x 455 mm) / 21.88 x 23.46 x 19.56 Inches (556 x 596 x 497 mm)
Weight (Unit/Gross)	45.19 lbs (20.5 kg) / 50.71 lbs (23.0 kg)
Environmental Considerations	Operating Temperature : 32°F ~ 104°F (0°C ~ 40°C) Humidity : 10 % ~ 80 % Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %
- Above models comply with SWEDAC MPR II / TCO95 recommendations for reduced electromagnetic fields. - Designs and specifications are subject to change without prior notice.	

2-2 Pin Assignments

Sync Type Pin No.	Separate	Macintosh
1	Red	GND-R
2	Green	Red
3	Blue	H/V Sync.
4	N-C	Sense 0
5	GND (DDC)	Green
6	GND-R	GND-G
7	GND-G	Sense 1
8	GND-B	Reserved
9	N-C	Blue
10	GND-Sync./Self-raster	Sense 2
11	N-C	GND
12	DDC Data	V-Sync.
13	H-Sync.	GND-B
14	V-Sync.	GND
15	DDC Clock	H-Sync.

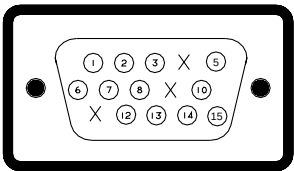


Figure 2-1. Male Type

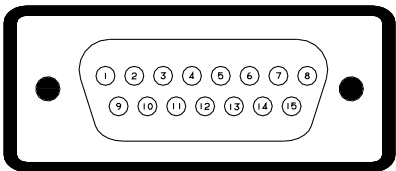


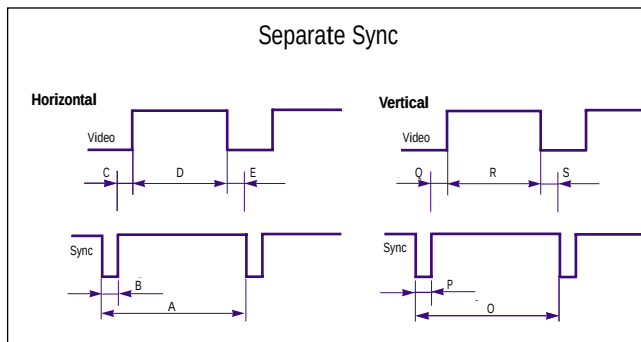
Figure 2-2. Male Type

2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Mode Timing	IBM		VESA					
	VGA2/70 Hz 720 x 400	VGA3/60 Hz 640 x 480	640/85 Hz 640 x 480	640/75 Hz 640 x 480	800/85 Hz 800 x 600	1024/75 Hz 1024 x 768	1024/85 Hz 1024 x 768	1280/75 Hz 1280 x 1024
fH (kHz)	31.469	31.469	43.269	37.500	53.674	60.023	68.677	79.976
A μ sec	31.777	31.778	23.111	26.667	18.631	16.660	14.561	12.504
B μ sec	3.813	3.813	1.556	2.032	1.138	1.219	1.016	1.067
C μ sec	1.907	1.907	2.222	3.810	2.702	2.235	2.201	1.837
D μ sec	25.422	25.422	17.778	20.317	14.222	12.698	10.836	9.481
E μ sec	0.636	0.636	1.556	0.508	0.569	0.203	0.508	0.119
fV (Hz)	70.087	59.940	85.008	75.000	85.061	75.029	84.997	75.025
O msec	14.268	16.683	11.764	13.333	11.756	13.328	11.765	13.329
P msec	0.064	0.064	0.671	0.08	0.056	0.05	0.044	0.038
Q msec	1.080	1.048	0.578	0.427	0.503	0.466	0.524	0.475
R msec	12.711	15.253	11.093	12.800	11.179	12.795	11.183	12.804
S msec	0.413	0.318	0.023	0.027	0.019	0.017	0.015	0.013
Clock Frequency (MHz)	28.322	25.175	36.000	31.500	56.250	78.750	94.500	135.000
Polarity								
H.Sync	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Positive
V.Sync	Positive	Negative	Negative	Negative	Positive	Positive	Positive	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate



A : Line time total

B : Horizontal sync width

O : Frame time total

P : Vertical sync width

C : Back porch

D : Active time

Q : Back porch

R : Active time

E : Front porch

S : Front porch

Memo

3 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the CA19JS monitor.

WARNING: This monitor contains electrostatically sensitive devices. Use with caution when handling these components.

3-1 Disassembly

Cautions: 1. Disconnect the monitor from the power source before disassembly.

2. To remove the Rear Cover, you must use the special opening jig tool.

3-1-1 Before Disassembly

1. Disconnect power cord from the monitor.
2. With a pad beneath it, stand the monitor on its front with the screen facing downward and the base close to you.

3-1-2 Cabinet Disassembly

1. Remove the Stand from the monitor.
(Refer to stand manual)
2. Remove 2 screws on the rear cover.



Figure 1

3. Tilt the monitor by lifting at the rear.



Figure 2

4. Push the opening jig in to each groove along the side of the monitor until it makes a “ttak” sound. (2 grooves : Left and right, make sure each snap is disengaged.)



Figure 3

5. Pull the rear cover up and away from the monitor.



Figure 4

6. Remove the shield.(TCO 95)

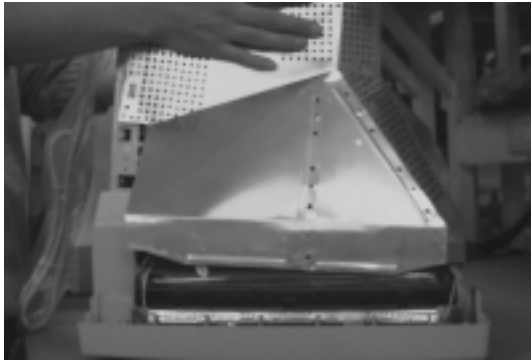


Figure 5

7. Using pinch-nose pliers or long-nose pliers, carefully disconnect the anode cap from the CRT.

Warning: Do not touch the anode contact on the CRT (High voltage may remain).

3-1-3 Removing the CRT Socket PCB

1. Complete all previous steps.
2. Loosen the screw on the CRT neck and remove the CRT socket PCB from the CRT.

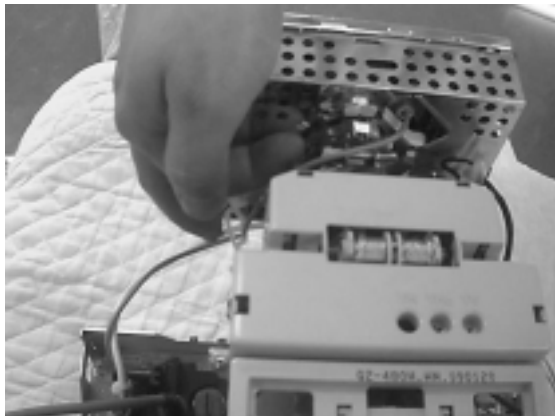


Figure 6

3. Disconnect all connectors on the CRT socket PCB.
4. Using a soldering iron, disconnect the ground (GND) on the back of the video shield and remove the shield cap.
5. Remove the screw on the front of the shield socket.
6. Desolder the 4 tabs on the CRT socket PCB and remove shield.
7. Place the video PCB on a flat, level surface that is protected from static electricity.

3-2 Reassembly

Reassembly procedures are in the reverse order of disassembly procedures.

3-1-4 Removing the Main PCB

1. Complete all previous steps.
2. Disconnect the degaussing coil at CN603 on the main PCB.
3. Disconnect all easily accessible ground wires on the PCB and bottom chassis.
4. Disconnect the DY connector at the CN403 connector on the main PCB.
5. Using the jig, release the snaps (2) connecting the front cover and the PCB then lift up the bottom to separate the two shields.

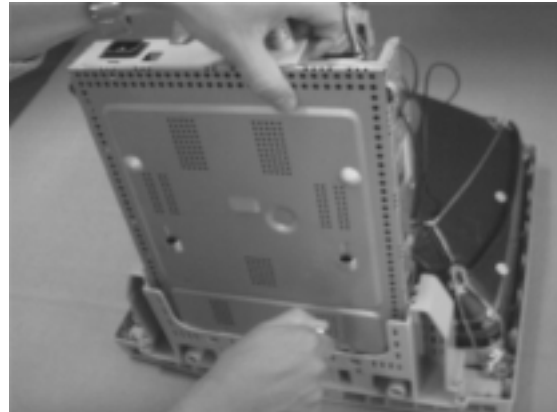


Figure 7

6. Disconnect the tilt connector at the CN304 connector on the main PCB.
7. Disconnect the sub PCB connector at the CN203 connector on the main PCB.
8. Remove the screws on the back and along each side of the bottom chassis.
9. Carefully lift the main PCB assy and remove the remaining ground wires.
10. Place the main PCB assy on a flat, level surface that is protected from static electricity.

3-1-5 CRT Assy Disassembly

1. Complete all previous steps.
2. Straighten the degaussing coil assembly coated metal ties and lift the coil assy from the CRT.
3. Remove the four corner screws and lift the CRT up and away from the front cover assembly and place it on a padded surface.

Caution: Do not lift the CRT by the neck.

If you will be returning this CRT to the monitor, be sure to place the CRT face downward on a protective pad.

4 Alignment and Adjustments

This section of the service manual explains how to make permanent adjustments to the monitor. Directions are given for adjustments using the monitor Interface board Ver. 2.0 and software (Softjig).

4-1 Adjustment Conditions

Caution: Changes made without the Softjig are saved only to the user mode settings. As such, the settings are not permanently stored and may be inadvertently deleted by the user.

4-1-1 Before Making Adjustments

4-1-1 (a) ORIENTATION

When servicing, always face the monitor to the east.

4-1-1 (b) WARM-UP TIME

The monitor must be on for 30 minutes before starting alignment. Warm-up time is especially critical in color temperature and white balance adjustments.

4-1-1 (c) SIGNAL

Analog, 0.7 Vp-p positive at 75 ohm, internal termination

Sync: TTL level, negative / positive

4-1-1 (d) SCANNING FREQUENCY

Horizontal: 30 KHz ~ 85 KHz (Automatic)

Vertical: 50 Hz ~ 160 Hz (Automatic)

Unless otherwise specified, adjust at the 1024 x 768 mode (68 KHz / 85 Hz) signal.

4-1-2 Required Equipment

The following equipment may be necessary for adjustment procedures:

4-1-2 (a) DISPLAY CONTROL ADJUSTMENT

1. Non-metallic (–) screwdriver:
1.5, 2.5, 3 mm
2. Non-metallic (+) screwdriver:
1.5, 2.5, 3 mm
3. Digital Multimeter (DMM), or
Digital Voltmeter
4. Signal generator, or
DM200 software
5. Personal computer

4-1-2 (b) COLOR ADJUSTMENTS

1. All equipment listed in 4-1-2 (a), above
2. Color analyzer, or any luminance
measurement equipment.

4-2 Display Control Adjustments

4-2-1 HIGH VOLTAGE

Signal: 1024 x 768 (68 KHz / 85 Hz)
 Display image: Don't care
 Contrast: Minimum
 Brightness: Minimum
 Limit: 27.5 kV $\pm$ 0.5 kV

Measure the high voltage level at the anode cap.
 High voltage should be within the limit as above.

4-2-2 SCREEN VOLTAGE CHECK

CONDITIONS

Signal: 1024 x 768 (68 KHz / 85 Hz)
 Display image: Full White Pattern
 Contrast: Minimum
 Brightness: Minimum
 Limit: 27.5 kV $\pm$ 0.5 kV

No Adjustment.

Only check with below table.

Table 4-1

	CRT Type	Screen Voltage
SDI	M46QCK 761X850	570V $\pm$ 10V

4-2-3 CENTER RASTER

Adjust VR401 so that the back raster comes to the center when you apply each basic mode.

4-2-4 Centering

Centering means to position the center point of the display in the middle of the display area. Horizontal size and position and vertical size and position control the centering of the display.

Adjust the horizontal size and vertical size to their optimal settings: 352 mm (H) x 264 mm.

Adjust the horizontal position and vertical position to ≤ 4.0 mm of the center point of the screen.

$$|A-B| \leq 4.0 \text{ mm} \quad |C-D| \leq 4.0 \text{ mm}$$

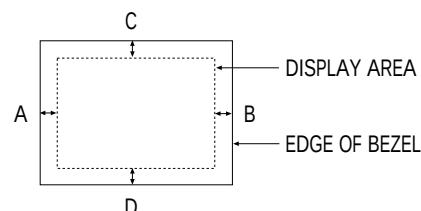


Figure 4-3. Centering

4-2-4 (a) HORIZONTAL SIZE ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

Use control bar after selecting "H-SIZE" in left menu to adjust the horizontal size of the display pattern to 352 mm with OSD "H-SIZE" fixed "39". (Tolerance: ± 3 mm.)

4-2-4 (b) VERTICAL SIZE ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

Use control bar after selecting "V-SIZE" in left menu to adjust the vertical size of the display pattern to 264 mm. (Tolerance: ± 3 mm.)

4-2-4 (c) HORIZONTAL POSITION ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern

Use control bar after selecting **“H-POSITION”** in left menu to center the horizontal image on the raster.

4-2-4 (d) VERTICAL POSITION ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern

Use control bar after selecting **“V-POSITION”** in left menu to center the vertical image on the raster.

4-2-5 Linearity

Linearity affects the symmetry of images as they appear on the screen. Unless each row or column of blocks in a crosshatch pattern is of equal size, or within the tolerances shown in Table 4-2, an image appears distorted, elongated or squashed.

$$\text{Horizontal Linearity} = 2x \frac{X_{\max} - X_{\min}}{X_{\max} + X_{\min}} \times 100$$

$$\text{Vertical Linearity} = 2x \frac{Y_{\max} - Y_{\min}}{Y_{\max} + Y_{\min}} \times 100$$

Table 4-2

	Adjacent Linearity	Entire Linearity
Preset mode	≤ 4%	≤ 8%
Pre-load mode (48KHz~)	≤ 5%	≤ 10%
Pre-load mode (under 48KHz)	≤ 5%	≤ 14%

✱ Preset Mode : 68 KHz / 85 Hz

Pre-load Mode : Refer to Timing Chart

4-2-5 (a) HORIZONTAL LINEARITY ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

To adjust Horizontal Linearity, refer to Table 4-2 for the tolerance range.

Increase or decrease **H_LIN** to optimize the image.

4-2-5 (b) VERTICAL LINEARITY ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

To adjust the Vertical Linearity, refer to Table 4-2 for the tolerance range.

Use control bar after selecting **“V-LINEARITY BAL”** in left menu to optimize the image.

4-2-6 Trapezoid Adjustment

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

Use control bar after selecting **“TRAPEZOID”** in left menu to make the image area rectangular.

$$|A - B| < 4 \text{ mm}$$

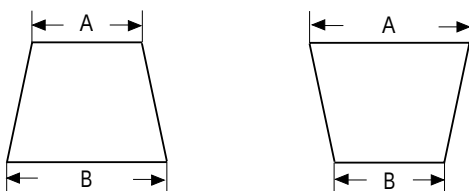


Figure 4-4. Trapezoid

4-2-7 Pinbalance Adjustment

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

$$|D1|, |D2| \leq 2.0 \text{ mm}$$

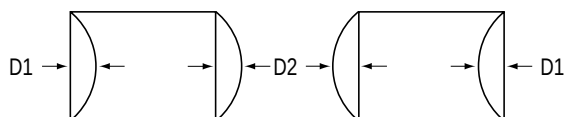


Figure 4-5. Pinbalance

Use control bar after selecting **“PINBALANCE”** in left menu to optimize the image.

4-2-8 Parallelogram Adjustment

CONDITIONS

Scanning Frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern
 Brightness: Maximum
 Contrast: Maximum

Use control bar after selecting **“PARALLEL”** in left menu to make the image area rectangular.

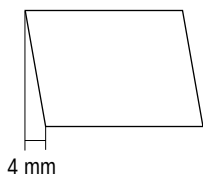


Figure 4-6. Parallelogram

4-2-9 Side Pincushion Adjustment

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Crosshatch pattern

Use control bar after selecting **“PINCUSHION”** in left menu to straighten the sides of the image area.

$$|C1|, |C2| \leq 2.0 \text{ mm}, |D1|, |D2| \leq 2.0 \text{ mm}$$

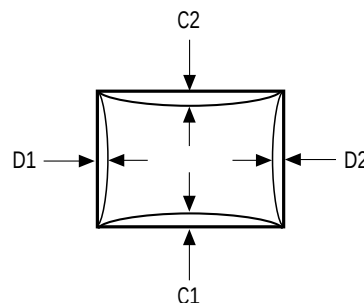


Figure 4-7. Pincushion

4-2-10 Degauss

No adjustments are available for the degaussing circuit. The degaussing circuit can effectively function only once every 30 minutes.

4-2-11 To Delete the User Mode Data

To delete the adjustment data from the user modes, click **“@4: USER DELETE”** in right menu.

4-2-12 Save the Data

To save the adjustment data for a mode, press **“@3: ALL MODE SAVE”** in right menu.

4-3 Color Adjustments

CAUTION: Check below condition before color adjustment
 Video signal : Analog 0.7 Vp-p (at 75 Ω)
 Sync : TTL level (H, V separate signal)

* Select "Color" in Softjig menu for color adjustment.

4-3-1 Color Coordinates (Temperature)

Color temperature is a measurement of the radiant energy transmitted by a color. For computer monitors, the color temperature refers to the radiant energy transmitted by white. Color coordinates are the X and Y coordinates on the chromaticity diagram of wavelengths for the visible spectrum.

CONDITIONS

Measurement instrument: Color analyzer
 Scanning frequency: 68 KHz / 85 Hz
 Display image: White flat field at center of display area
 Luminance: Maximum

PROCEDURE

Use the directions in sections 4-3-2 through 4-3-3 to adjust the color coordinates for:

9300K to $x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$

6500K to $x = 0.313 \pm 0.02$, $y = 0.329 \pm 0.02$

4-3-2 Color Adjustments

4-3-2 (a) BACK RASTER COLOR ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Back raster pattern
 Brightness: Maximum
 Contrast: Maximum

1. Select "**@1: CHANNEL 1**" in right menu to control the color for 9300K.
2. Adjust the luminance of the back raster to between 0.5 to 0.7 ft-L using control bar after selecting "**GREEN CUTOFF**" in the menu.
3. Use control bar after selecting "**BLUE CUTOFF**" in left menu to set the "y" coordinate to 0.298 ± 0.02
4. Use control bar after selecting "**RED CUTOFF**" in left menu to 0.283 ± 0.02

* If color values can not be matched to desirable values, repeat sequences 3 and 4 after readjusting "GREEN CUTOFF" control.

4-3-2 (b) WHITE BALANCE ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: White box pattern
 Brightness: 0.06 ft-L at Back Raster
 Pattern Display
 Contrast: Maximum

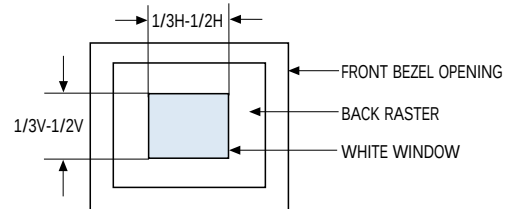


Figure 4-8. White Box Pattern

1. Use control bar after selecting "RED GAIN", "GREEN GAIN" and "BLUE GAIN" to adjust the luminance to 36ft-L with the color coordinates ranged for 9300K to $x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$.

4-3-2 (c) HIGH LIGHT ZONE ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: White box pattern
 Brightness: 0.06ft-L at Back Raster
 Pattern Display
 Contrast: Maximum

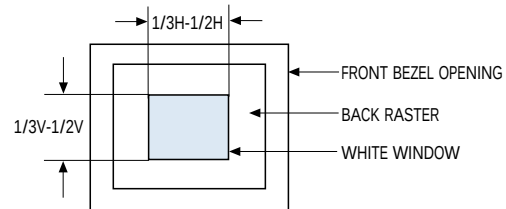


Figure 4-9. High Light Box Pattern

1. Select "**@9: BMFULL**" in right menu.
2. Use control bar after selection "BM CONT" to adjust the luminance to 65ft -L (± 5 ft-L)
3. Select "**@0: BM OFF**" in right menu.

4-3-2 (d) ABL ADJUSTMENT

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Full white pattern
 Brightness: 0.06ft-L at Back Raster
 Pattern Display
 Contrast: Maximum

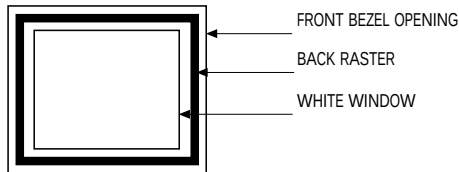


Figure 4-10. Full White Pattern

1. Check the ABL. If it is not within specifications, use the ABL controls to adjust. (30 ± 1ft-L)
2. Select **"@4: COLOR SAVE"** to save the data.
3. Select **"@6: ALL COLOR SAVE"** to save CH2.

4-3-2 (e) WHITE BALANCE ADJUSTMENT VERIFICATION

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 Display image: Back raster pattern
 Full White Pattern
 X-Y Coordinates: $x = 0.283 \pm 0.02$,
 $y = 0.298 \pm 0.02$
 ABL Luminance: Refer to 4-3-2(c)
 Brightness: Maximum
 Contrast: 5 ft-L, 24 ft-L

1. Check whether the color coordinates of the back raster satisfy the above spec.
 If they do not, return to 4-3-2 (a) and readjust all settings.
2. Display a full white pattern.
3. Select "Geometry" in softjig menu.

4. Select "@7: 5-ft " in right menu.
5. Check whether the white coordinates of the video meet the above coordinates spec.
6. Select "@8: 24-ft " in right menu.
7. Check whether the white coordinates of the video satisfies the above spec.
 If they do not, return to 4-3-2 (a) and readjust all settings.

Select "Color" and click "@2: CHANNEL 2" for color adjustment for 6500K.

Repeat the sequence for 9300K adjustment. Luminance values are the same as 9300K, but the color coordinates of back raster and white box are : $x = 0.313 \pm 0.02$ $y = 0.329 \pm 0.02$

4-3-3 Luminance Uniformity Check

Luminance is considered uniform only if the ratio of lowest to highest brightness areas on the screen is not less than 7.5:10.

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
 (1024 x 768)
 Display image: White flat field
 Brightness: Cut off point at 24 ft-L
 Contrast: Maximum

PROCEDURE

Measure luminance at nine points on the display screen (see figure below).

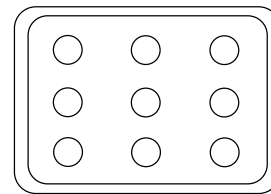


Figure 4-11. Luminance Uniformity Check Locations

4-3-4 Focus Adjustment

CONDITIONS

Scanning frequency: 68 KHz / 85 Hz
(1024 x 768)
Display image: "H" character pattern
Brightness: Cut off point
Contrast: Maximum

PROCEDURE

1. Adjust the Focus VR on the FBT to display the sharpest image possible.
2. Use Locktite to seal the Focus VR in position.

4-3-5 Color Purity Adjustment

Color purity is the absence of undesired color. Conspicuous mislanding (unexpected color in a uniform field) within the display area shall not be visible at a distance of 50 cm from the CRT surface.

CONDITIONS

Orientation: Monitor facing east
Scanning frequency: 68 KHz / 85 Hz
Display image: White flat field
Luminance: Cut off point at the center of the display area

Note: Color purity adjustments should only be attempted by qualified personnel.

PROCEDURE

For trained and experienced service technicians only.

Use the following procedure to correct minor color purity problems:

1. Make sure the display is not affected by external magnetic fields.
2. Make sure the spacing between the PCM assembly and the CRT stem is $29 \text{ mm} \pm 1 \text{ mm}$.
3. Display a green pattern over the entire display area.
4. Adjust the purity magnet rings on the PCM assembly to display a pure green pattern.
(Optimum setting: $x = 0.295 \pm 0.015$, $y = 0.594 \pm 0.015$)

Red:	$x = 0.640 \pm 0.015$	$y = 0.323 \pm 0.015$
Green:	$x = 0.295 \pm 0.015$	$y = 0.594 \pm 0.015$
Blue:	$x = 0.142 \pm 0.015$	$y = 0.066 \pm 0.015$

Table 4-3. Color Purity Tolerances
(For 9300K color adjustment: $x = 0.283 \pm 0.02$, $y = 0.298 \pm 0.02$)

5. When you have the PCMs properly adjusted, carefully glue them together to prevent movement during shipping.

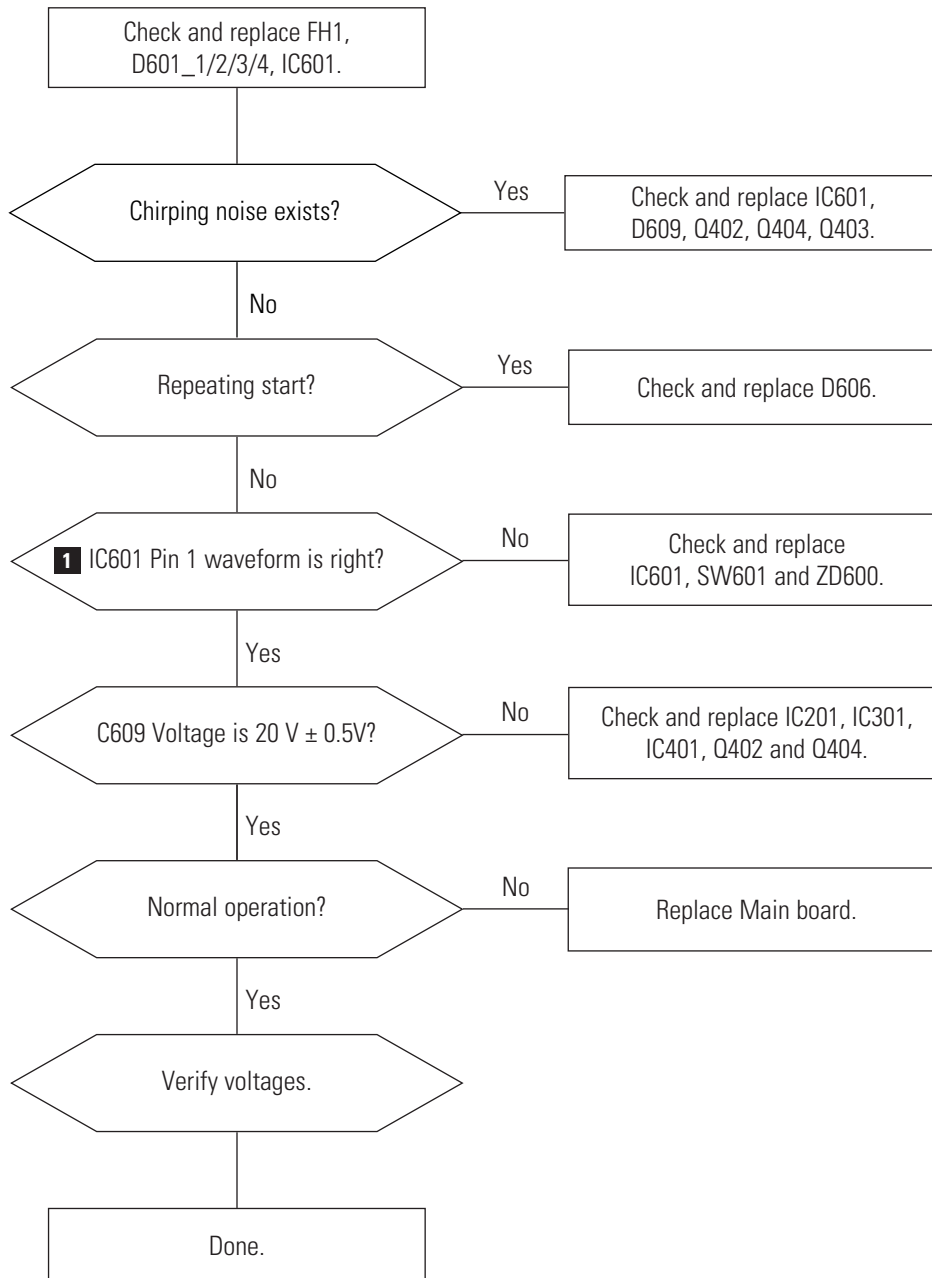
Memo

5 Troubleshooting

5-1 Parts Level Troubleshooting

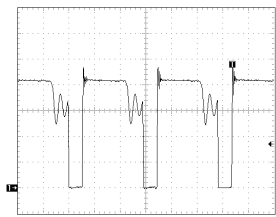
- Notes:** 1. If a picture does not appear, fully rotate the brightness and contrast controls clockwise and reinspect.
2. Check the following circuits.
- No raster appears: Power circuit, Horizontal output circuit.
 - High voltage develops but no raster appears: Video output circuits.
 - High voltage does not develop: Horizontal output circuits.

5-1-1 No Power Supply

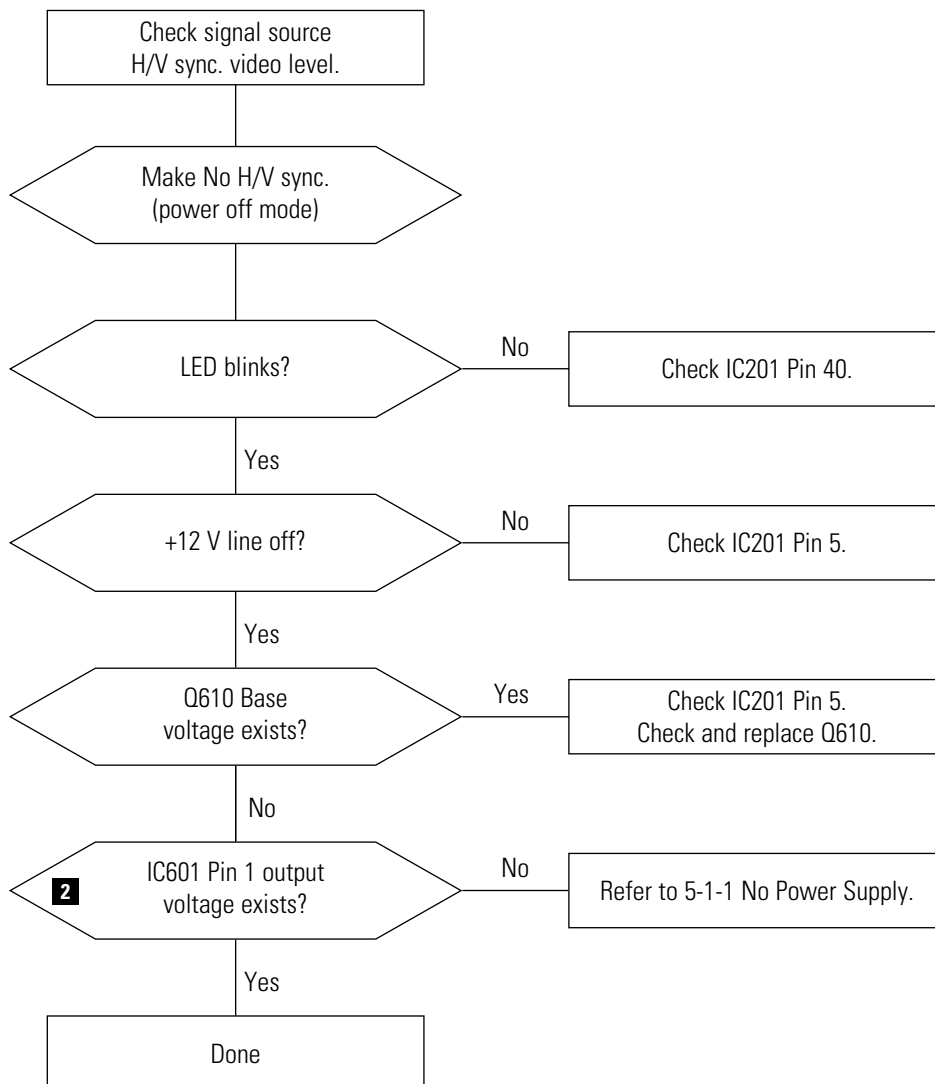
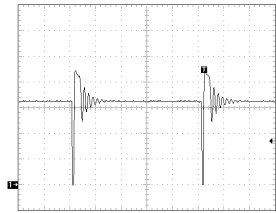


WAVEFORMS

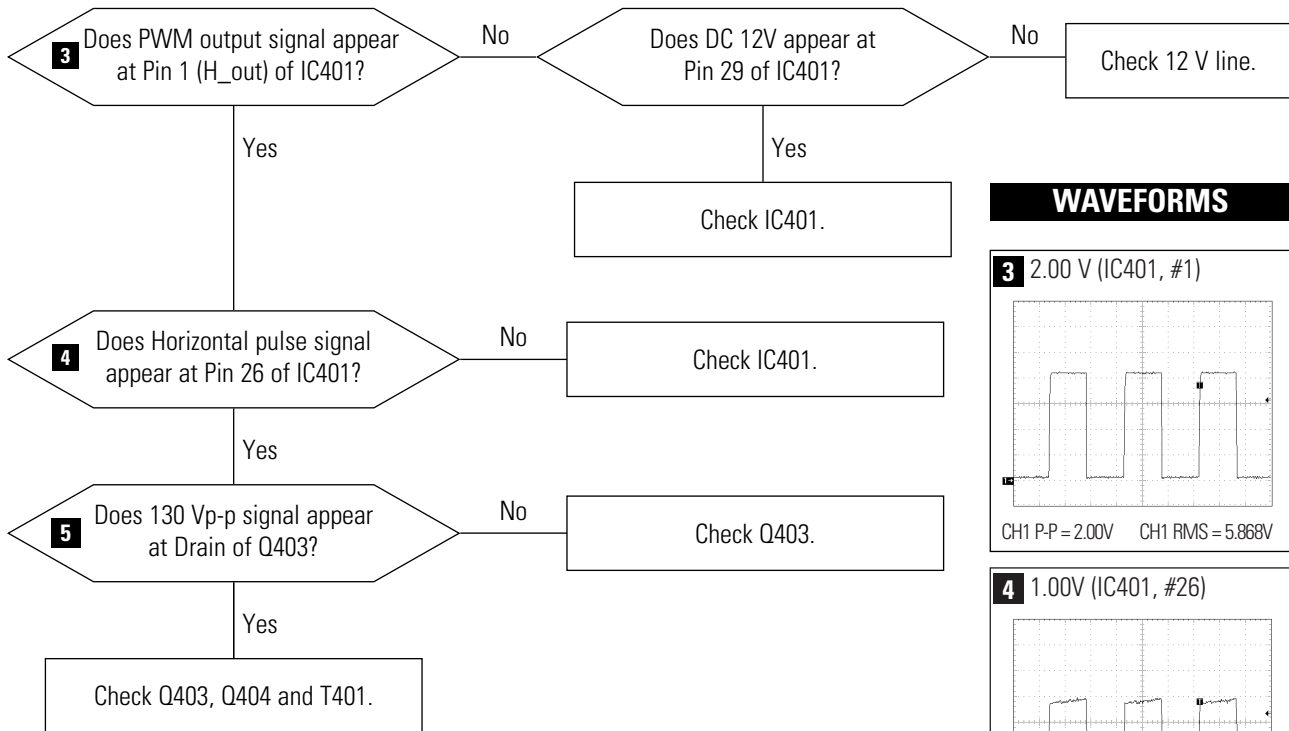
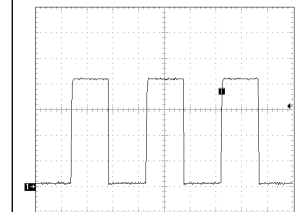
1 100 V (IC601, #1)



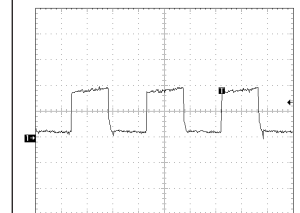
CH1 P-P = 100 V CH1 RMS = 350.2 V

5-1-2 DPMS Failure**WAVEFORMS****2** 100 V (IC601, #1)

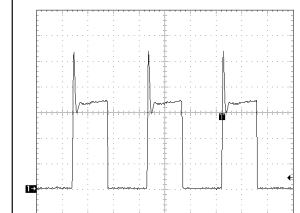
CH1 P-P = 100 V CH1 RMS = 325.8 V

5-1-3 H_Deflection Failure**WAVEFORMS****3** 2.00 V (IC401, #1)

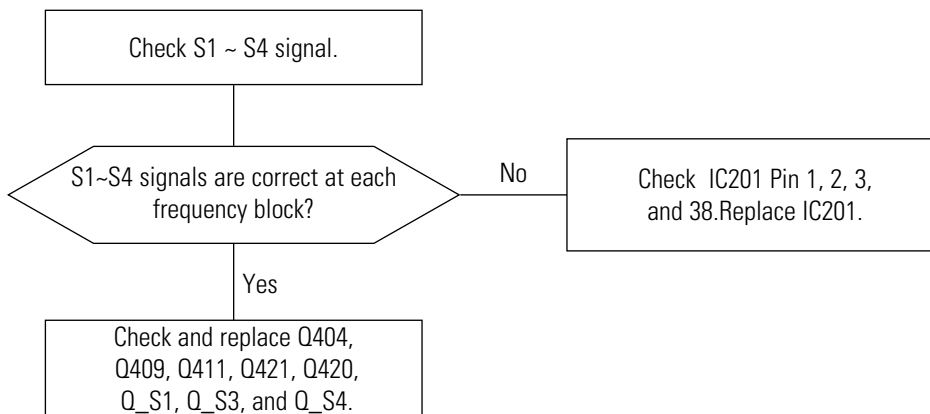
CH1 P-P = 2.00V CH1 RMS = 5.868V

4 1.00V (IC401, #26)

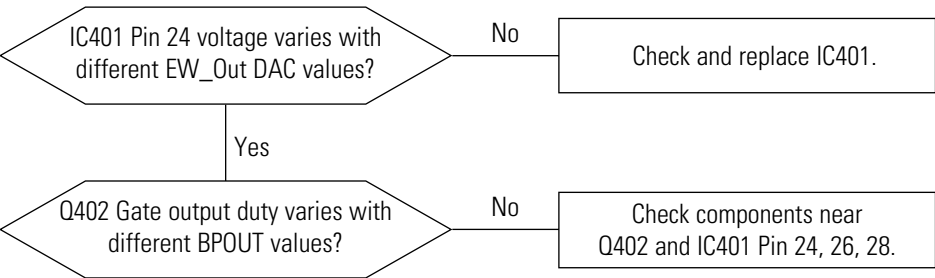
CH1 P-P = 1.00V CH1 RMS = 1.298V

5 20.0 V (Q403, Drain)

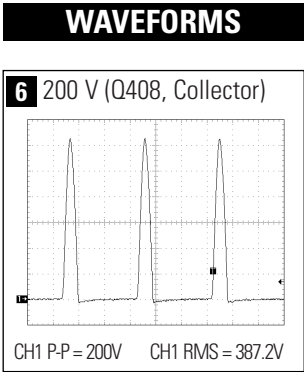
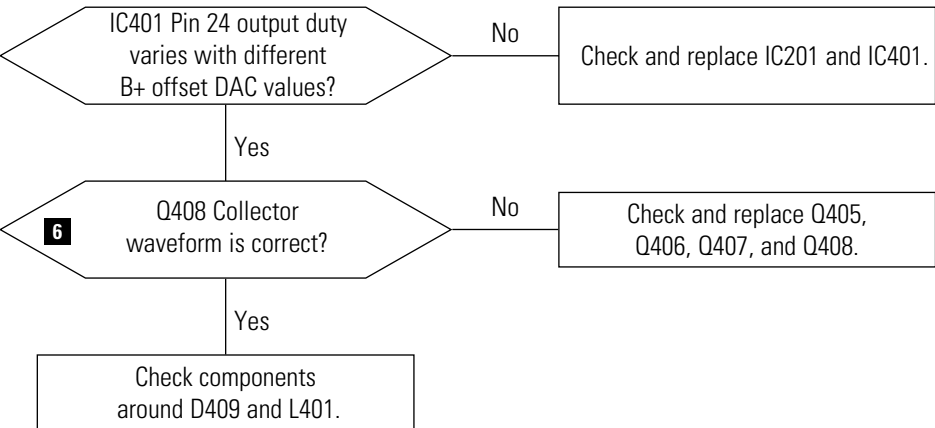
CH1 P-P = 20.0 V CH1 RMS = 46.80V

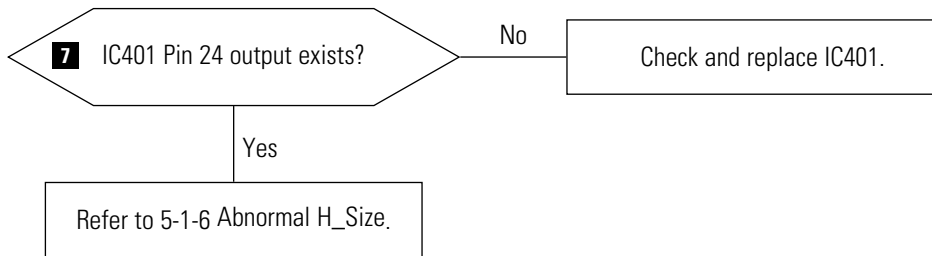
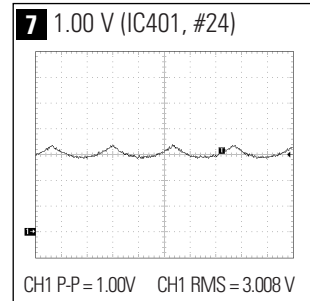
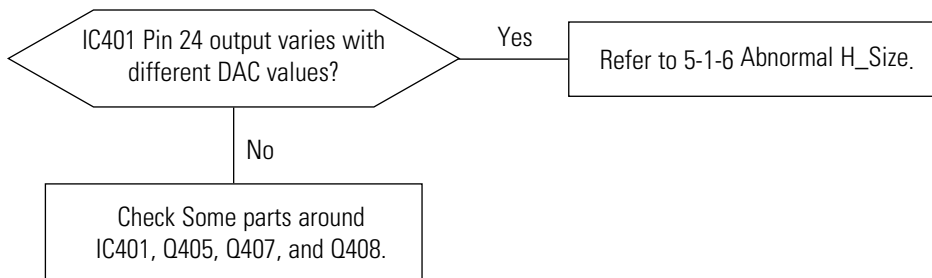
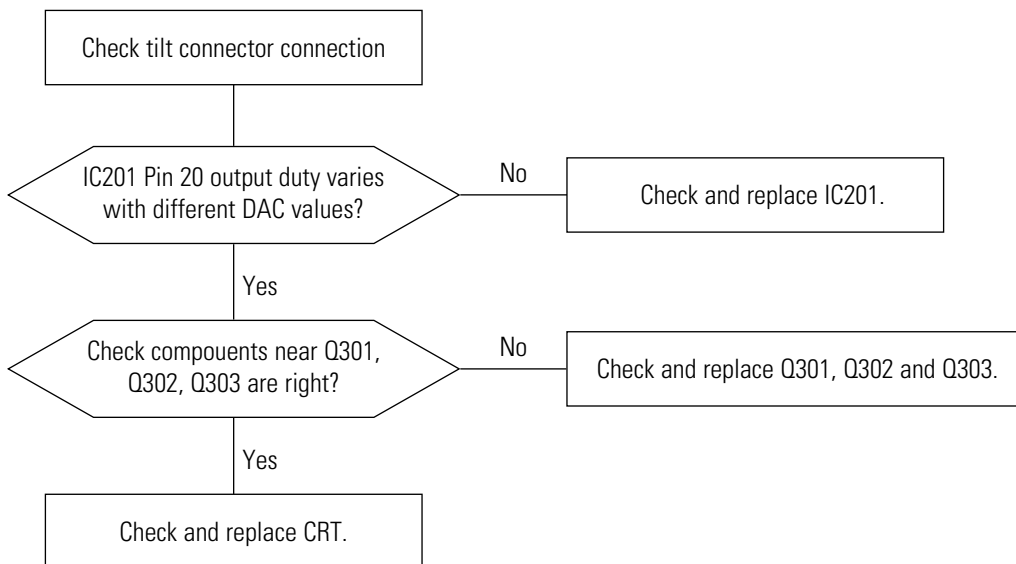
5-1-4 S Correction Failure

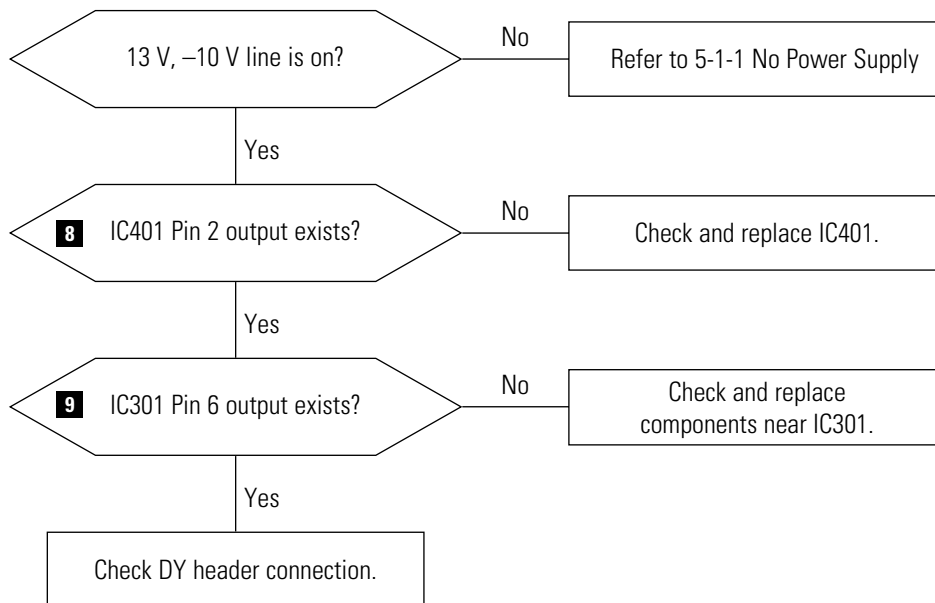
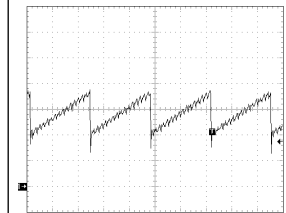
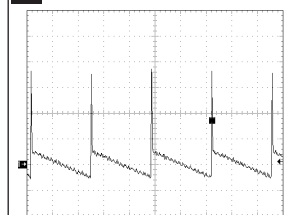
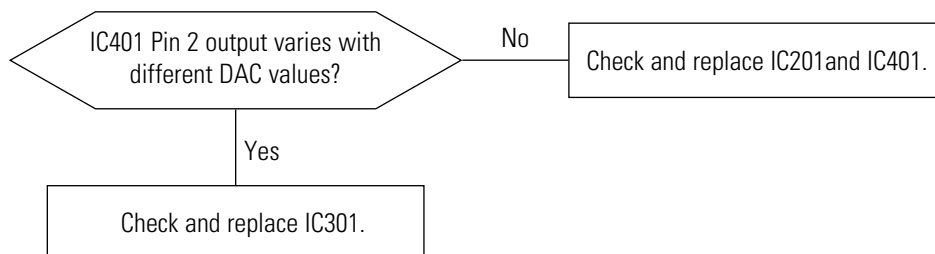
5-1-5 Invariable H_Size



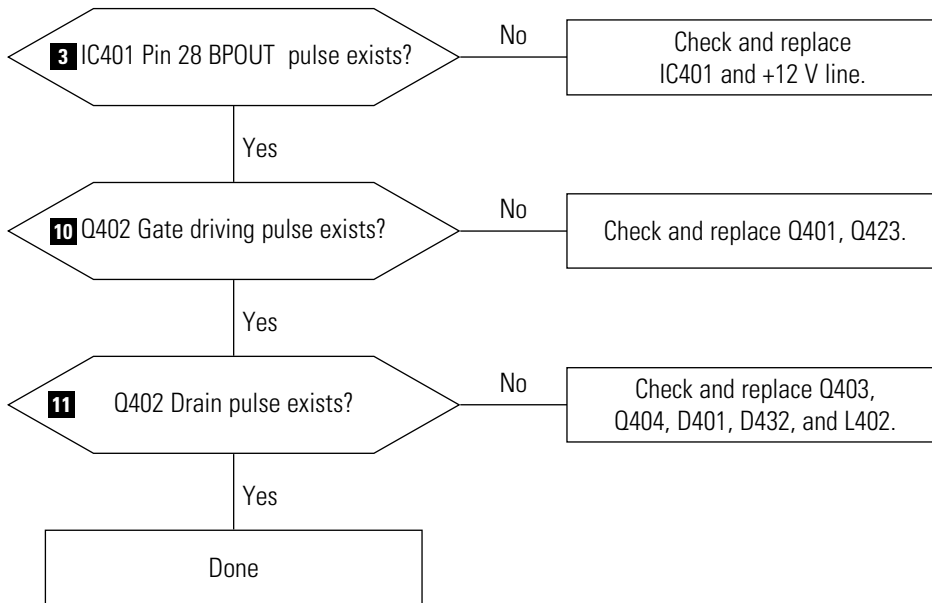
5-1-6 Abnormal H_Size



5-1-7 Side Pin or Trap Failure**WAVEFORMS****5-1-8 Para. or Pin Balance Failure****5-1-9 Tilt Failure**

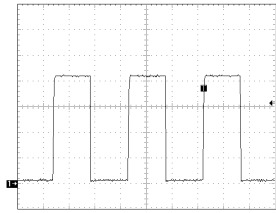
5-1-10 V Deflection Failure**WAVEFORMS****8** 500 V (IC401, #2)**9** 10.0 V (IC301, #6)**5-1-11 V Size or Pos. Variation Failure**

5-1-12 High Voltage Failure



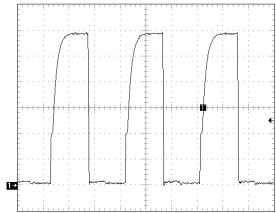
WAVEFORMS

3 2.00 V (IC401, #28)



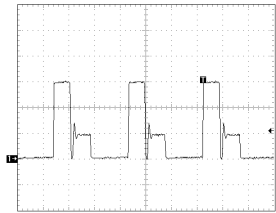
CH1 P-P = 2.00V CH1 RMS = 5.868V

10 2.00 V (Q402, Gate)



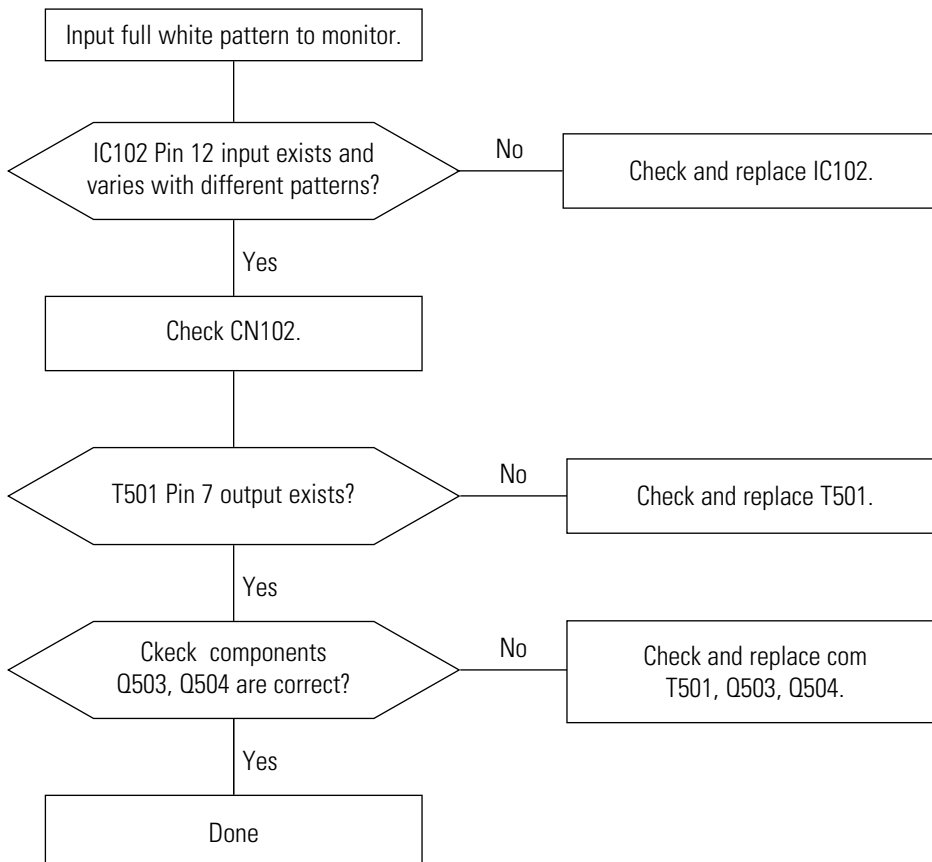
CH1 P-P = 2.00 V CH1 RMS = 7.692V

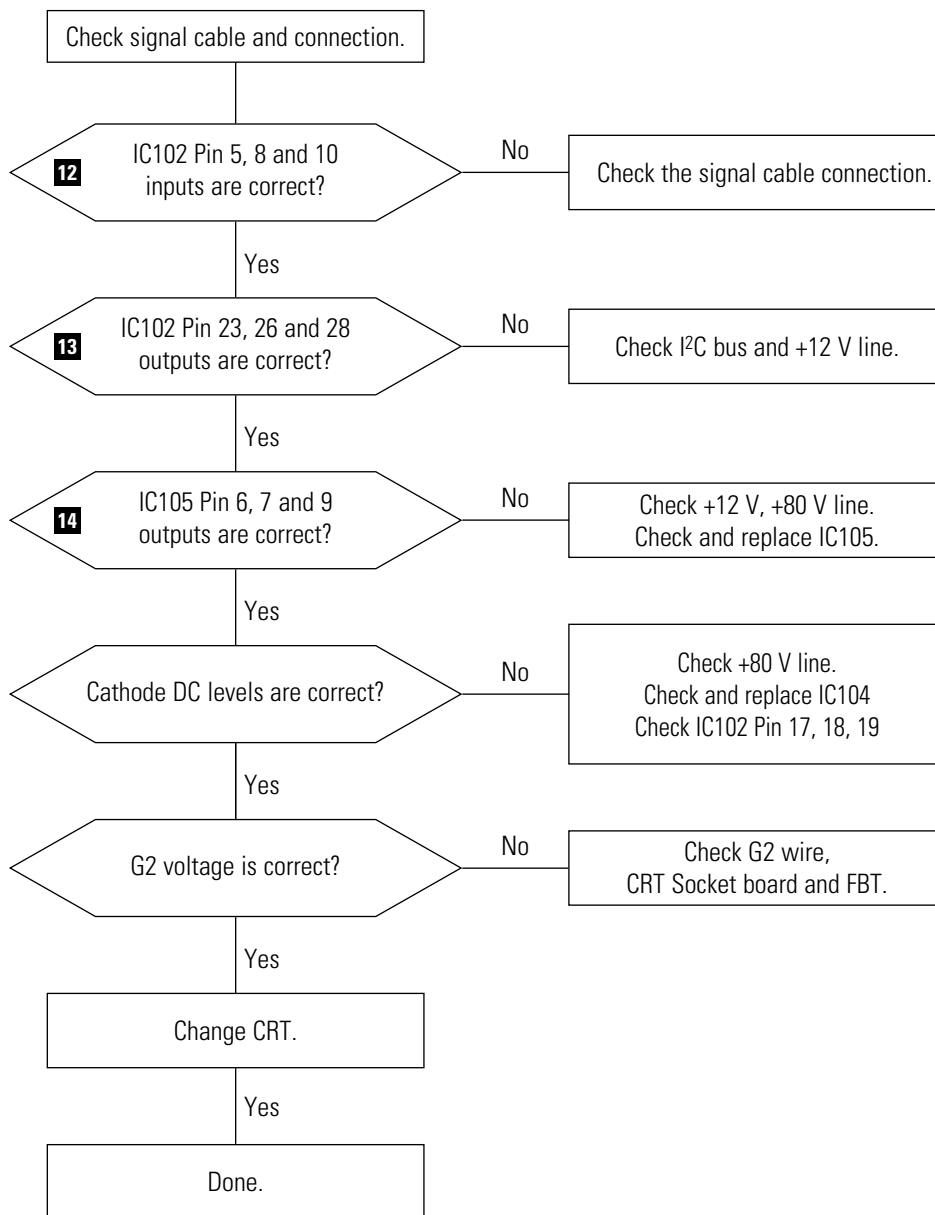
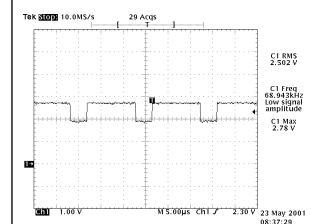
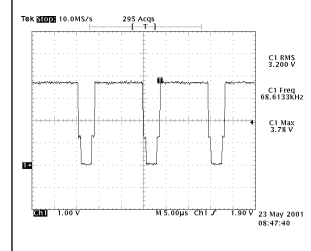
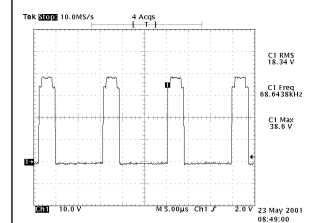
11 50.0 V (Q402, Drain)

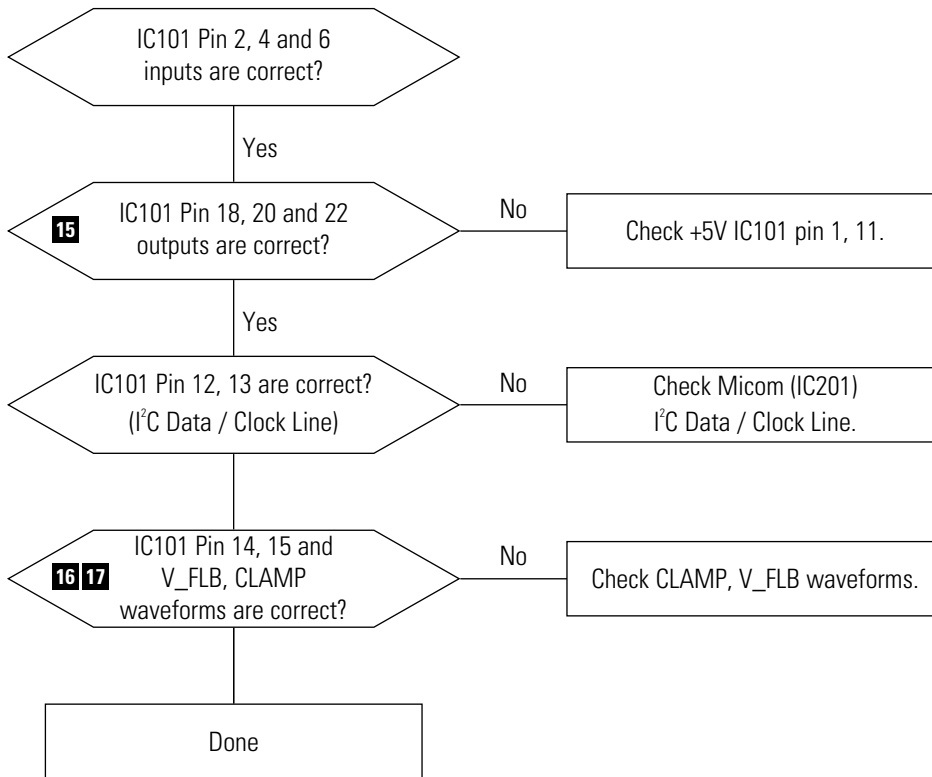
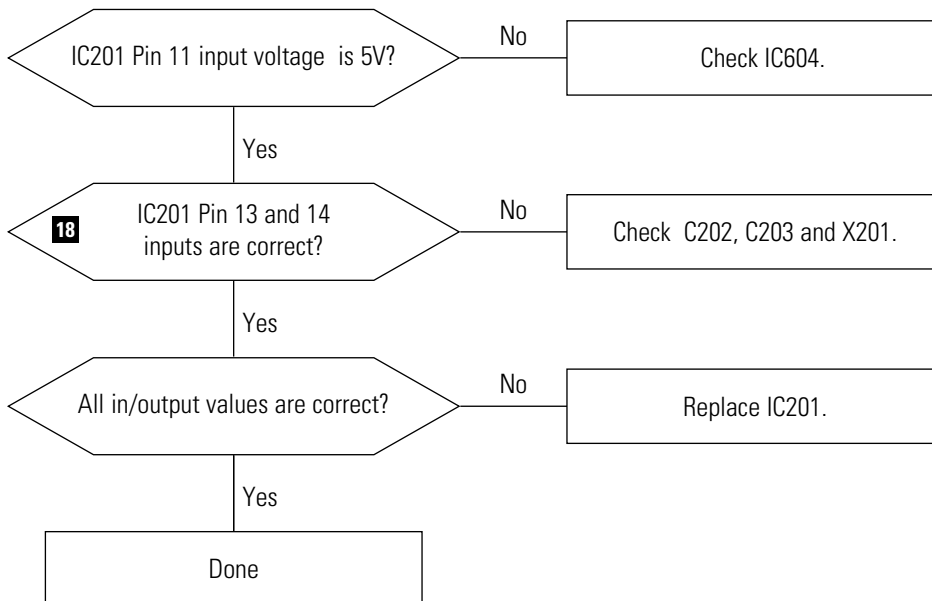
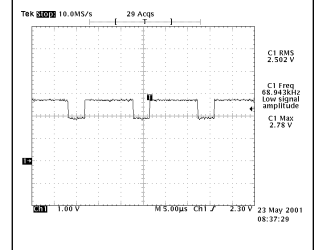
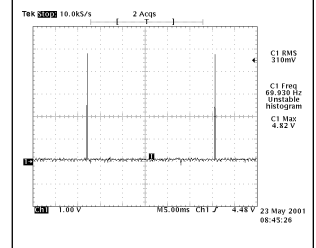
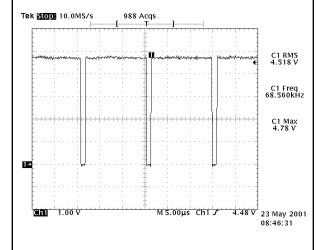
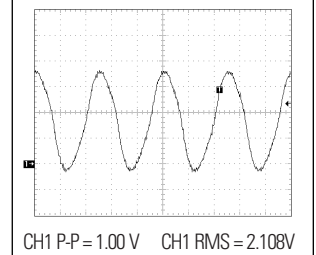


CH1 P-P = 50.0 V CH1 RMS = 73.7V

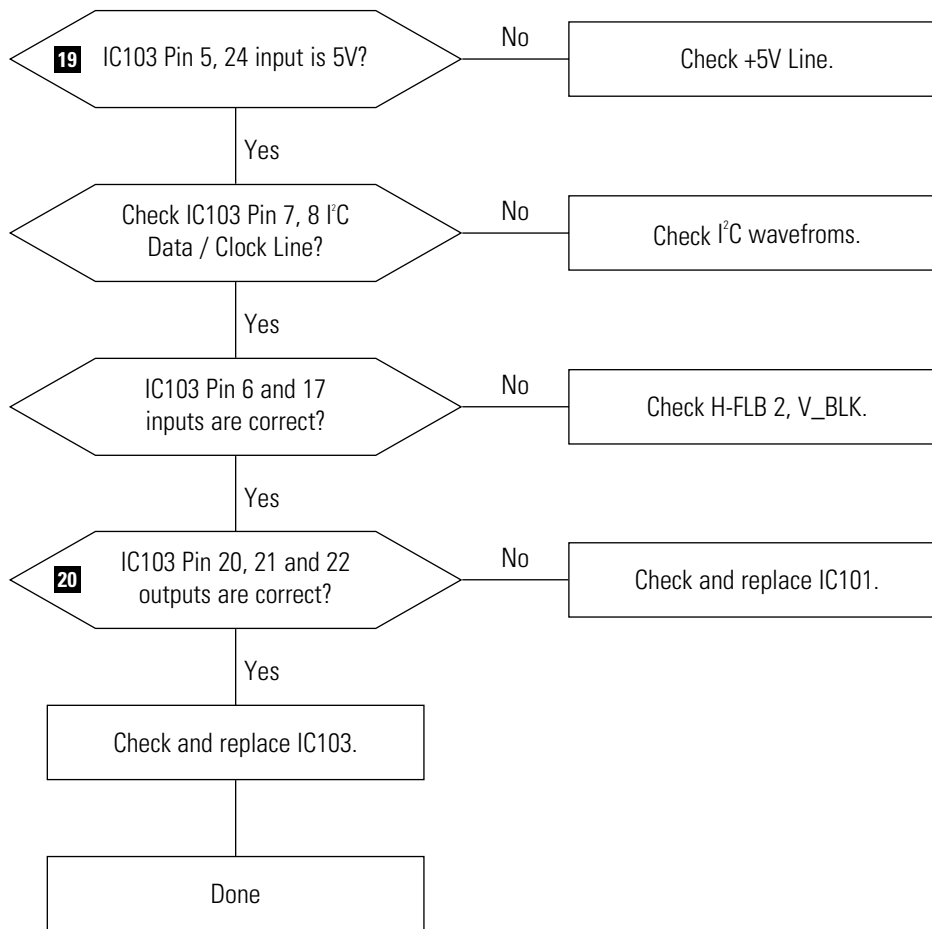
5-1-13 ABL Failure



5-1-14 No Video**WAVEFORMS****12** 1.00 V (IC102, #5, 8, 10)**13** 1.00 V (IC102, #23,26,28)**14** 20.0 V (IC105, #6, 7, 9)

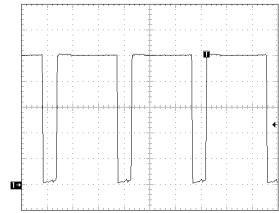
5-1-15 No Highlight Zone**5-1-16 Micom Failure****CONFIDENTIAL****WAVEFORMS****15** 1.00 V (IC101, #18, 20, 22)**16** 1.00 V (IC101, #14)**17** 1.00 V (IC101, #15)**WAVEFORMS****18** 1.00 V (IC201, #13, 14)

5-1-17 OSD Failure

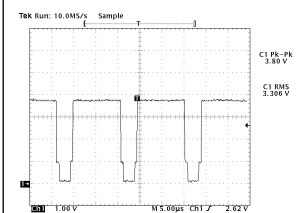


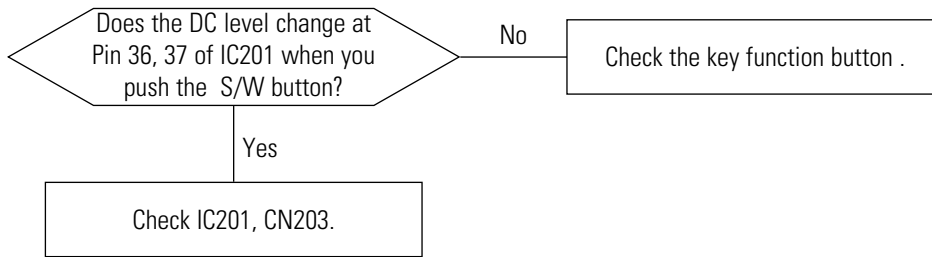
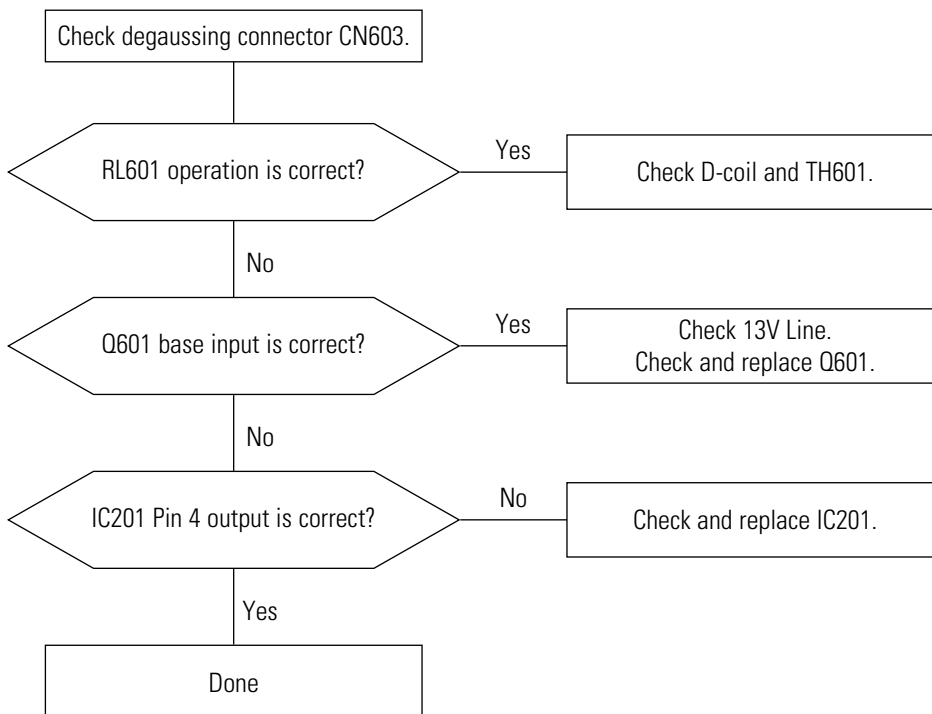
WAVEFORMS

19 1.00 V (IC103, #5, 24)



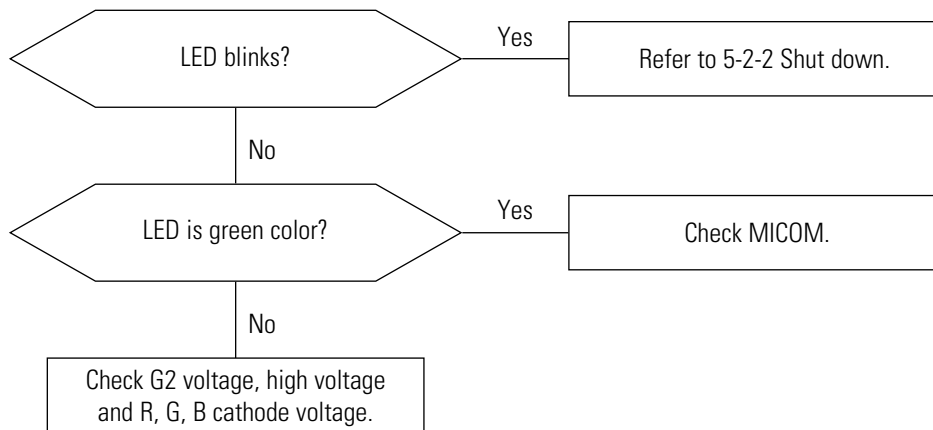
20 1.00 V (IC103, #20, 21, 22)



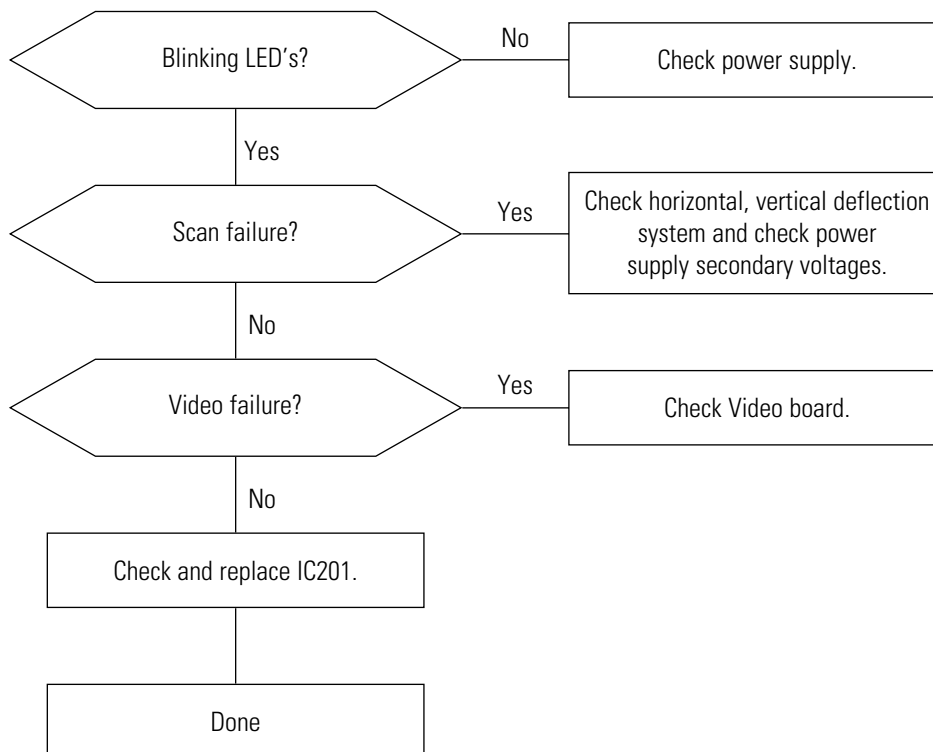
5-1-18 User Control Failure**5-1-19 Degaussing Failure**

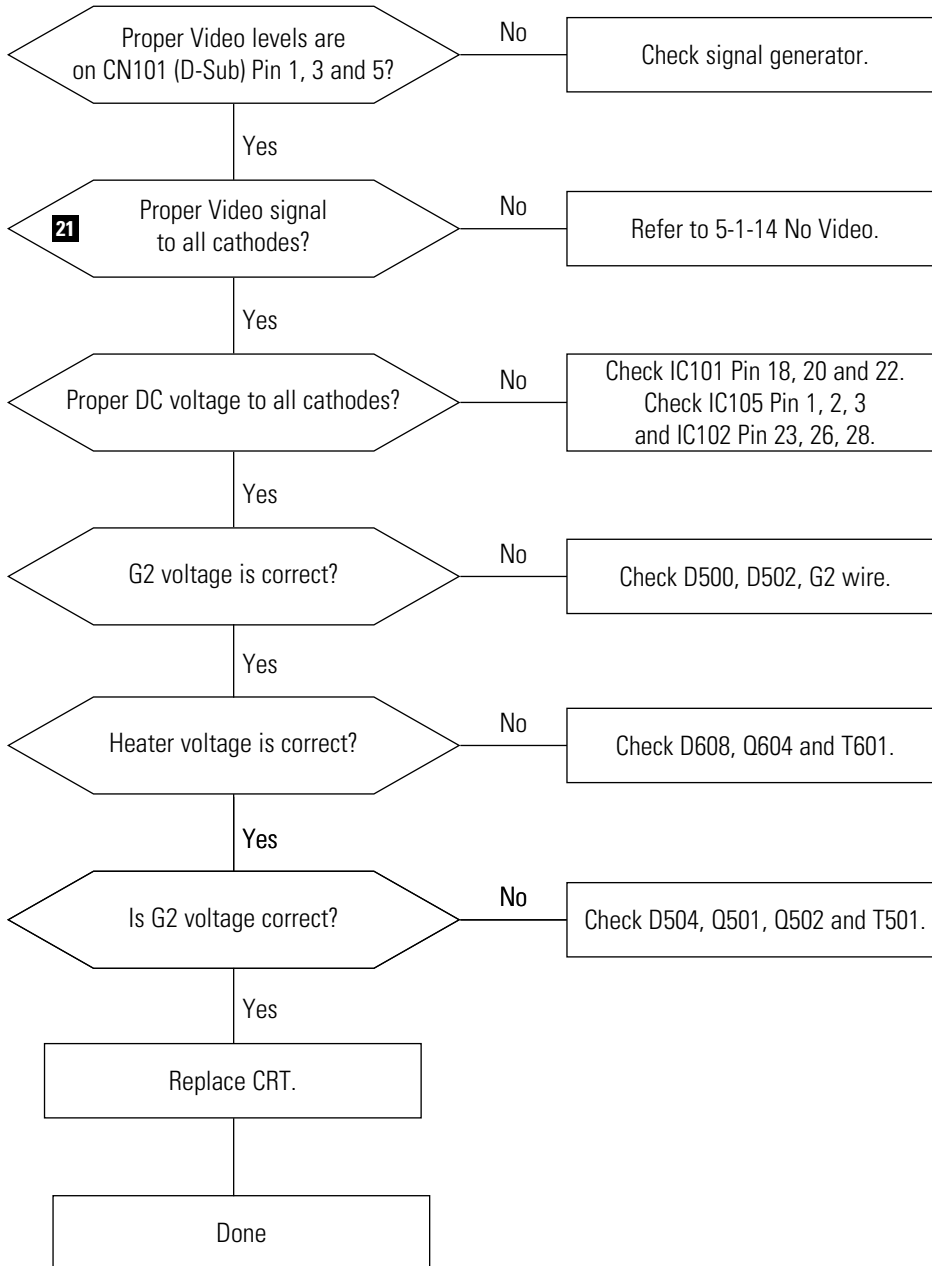
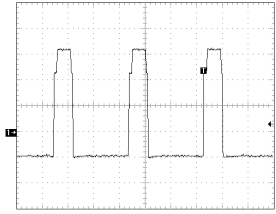
5-2 General Troubleshooting

5-2-1 No Picture



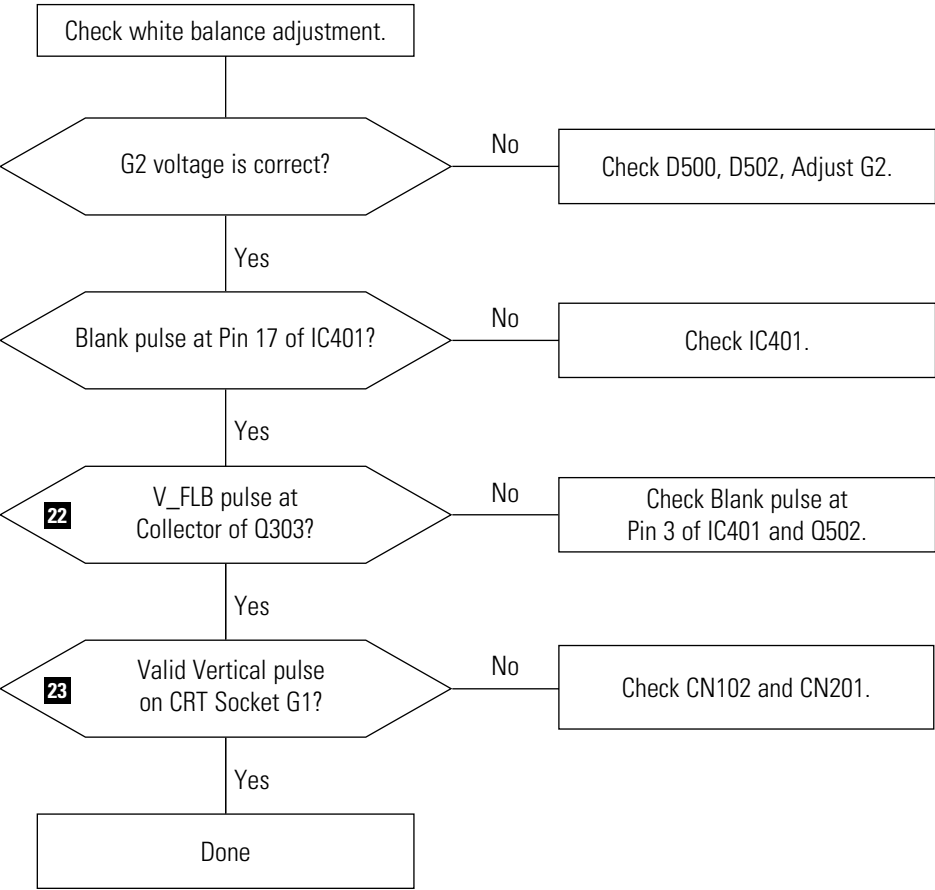
5-2-2 Shut Down



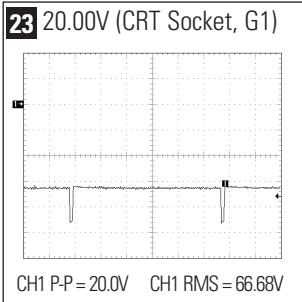
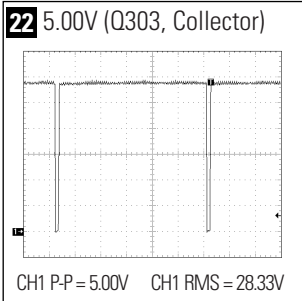
5-2-3 Missing Color**WAVEFORMS****21** 10.0 V (R,G,B, Video)

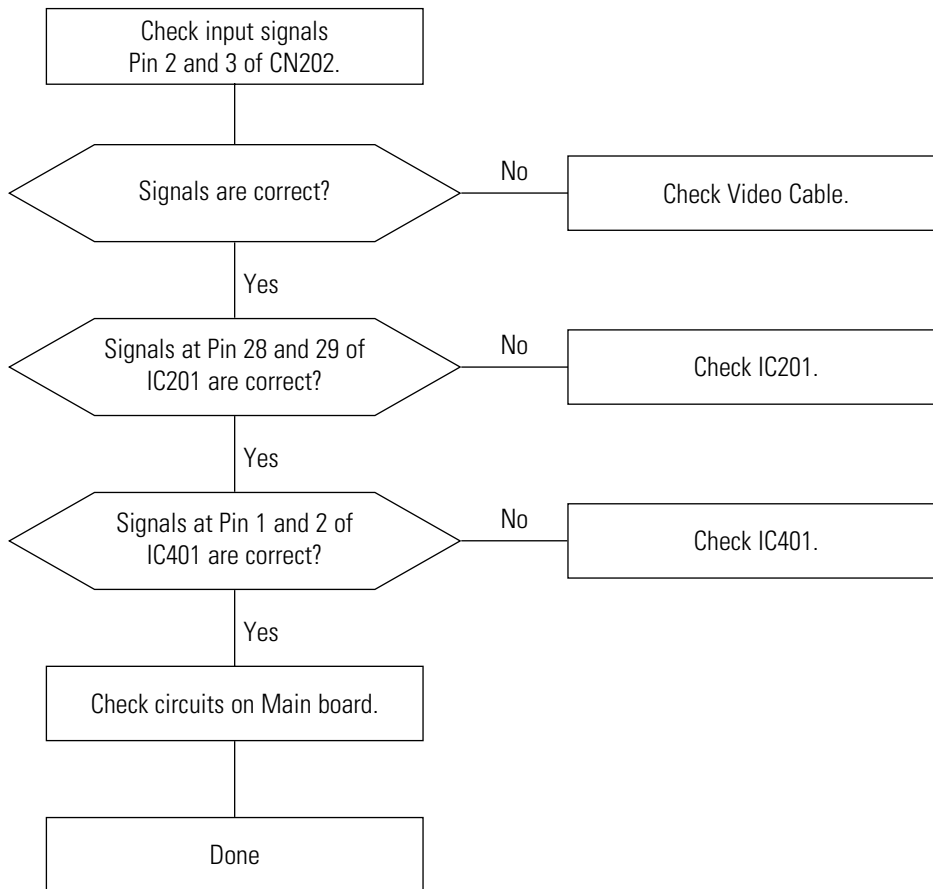
CH1 P-P = 10.0V CH1 RMS = 17.02V

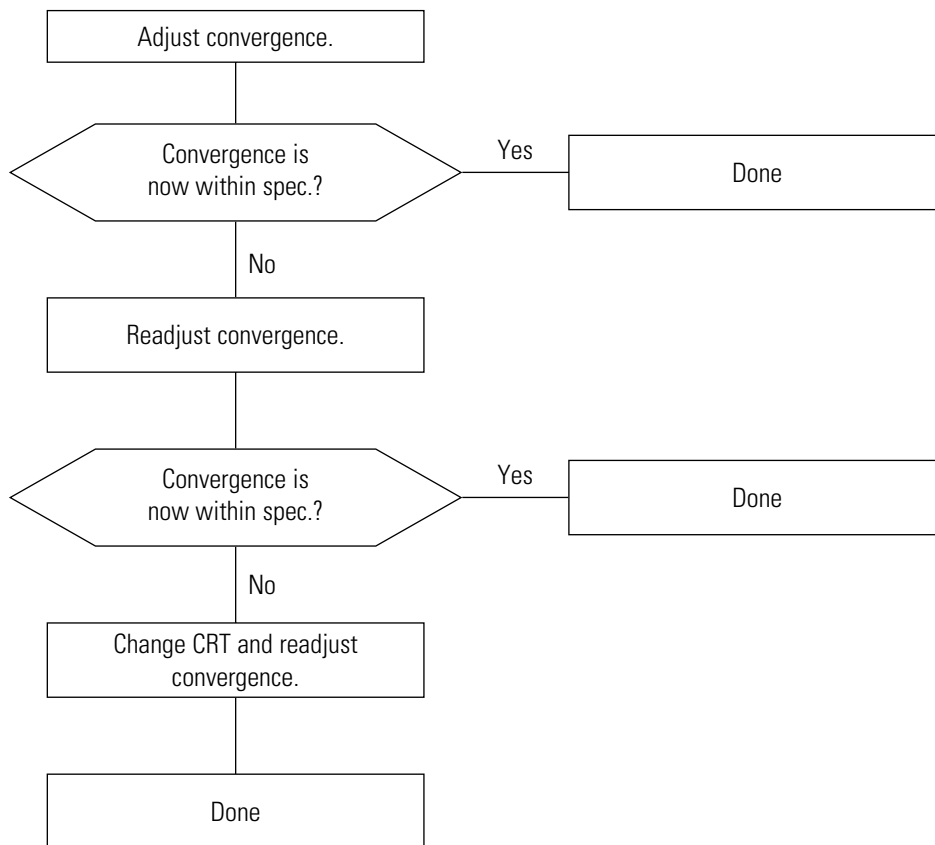
5-2-4 Visible Retrace

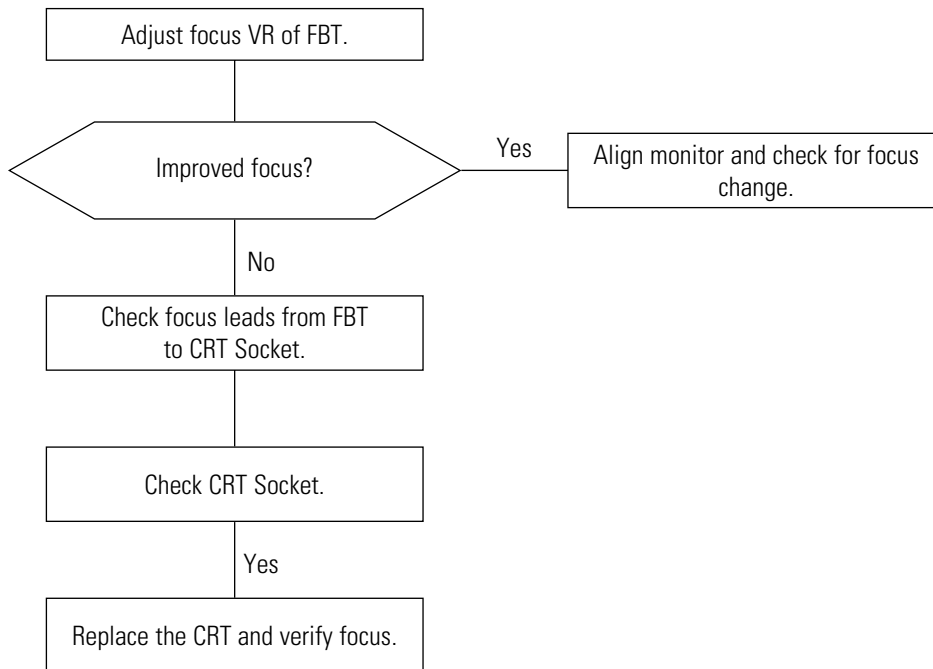
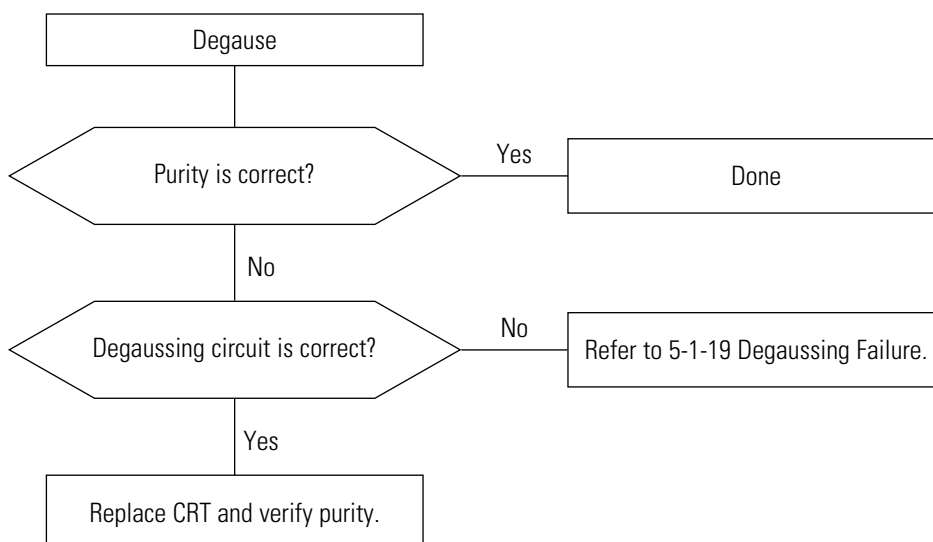


WAVEFORMS



5-2-5 Unsynchronized Image

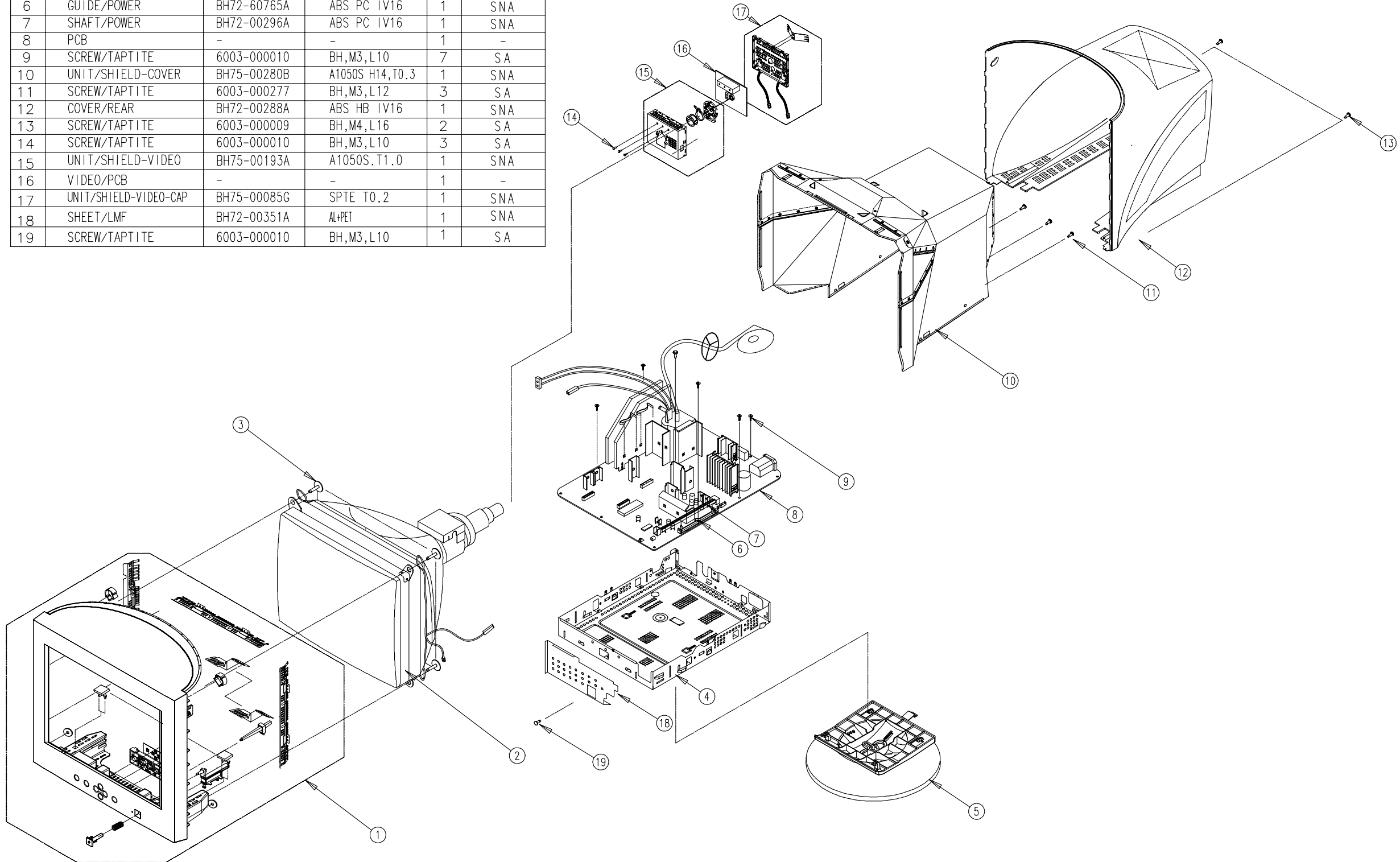
5-2-6 Misconvergence

5-2-7 Poor Focus**5-2-8 Purity Failure**

Memo

6 Exploded View and Parts List

NO	DESCRIPTION	CODE-NO(CA19JS)	SPECIFICATION	Q'TY	REMARK
1	UNIT/COVER-FRONT	BH96-00089A	ABS HB 1V16	1	SA
2	CDT	-	-	1	-
3	SCREW/TAPTITE	6006-001010	BH,M5,L25	4	SA
4	SHIELD-BOTTOM	BH71-00141A	SECC T1.0	1	SNA
5	UNIT/STAND-ASS'Y	BH75-00335B	ABS HB 1V16	1	SNA
6	GUIDE/POWER	BH72-60765A	ABS PC 1V16	1	SNA
7	SHAFT/POWER	BH72-00296A	ABS PC 1V16	1	SNA
8	PCB	-	-	1	-
9	SCREW/TAPTITE	6003-000010	BH,M3,L10	7	SA
10	UNIT/SHIELD-COVER	BH75-00280B	A1050S H14,T0.3	1	SNA
11	SCREW/TAPTITE	6003-000277	BH,M3,L12	3	SA
12	COVER/REAR	BH72-00288A	ABS HB 1V16	1	SNA
13	SCREW/TAPTITE	6003-000009	BH,M4,L16	2	SA
14	SCREW/TAPTITE	6003-000010	BH,M3,L10	3	SA
15	UNIT/SHIELD-VIDEO	BH75-00193A	A1050S.T1.0	1	SNA
16	VIDEO/PCB	-	-	1	-
17	UNIT/SHIELD-VIDEO-CAP	BH75-00085G	SPTE T0.2	1	SNA
18	SHEET/LMF	BH72-00351A	AL+PET	1	SNA
19	SCREW/TAPTITE	6003-000010	BH,M3,L10	1	SA



Memo

7 Electrical Parts List

7-1 Main PCB Parts

Loc. No.	Code No.	Description	Specification	Remarks
-	BH94-00875A	ASSY PCB MAIN	CA19JS,CA19JS-09E5/0503	SNA
C302	2301-000168	C-FILM,PEF	150nF,5%,100V,TP,11.5x19mm,7.5	
C409	2306-000147	C-FILM,MPPF	1uF,5%,250V,BK,26x24x15,22.5mm	
C430	2306-000263	C-FILM,MPPF	770nF,5%,250V,BK,26x21.5x13.5,	
C601	2301-001195	C-FILM,MPPF	150nF,10%,275VAC,BK,26x16.5x7,	
C602	2301-001195	C-FILM,MPPF	150nF,10%,275VAC,BK,26x16.5x7,	
C608	2401-003391	C-AL	220uF,20%,450V,GP,BK,25x50,10	
CIS	0201-001053	ADHESIVE-RBR	DC-3140_RTV#0414,TRP,-,-	SNA
CIS	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
CIS	6502-000001	CABLE CLAMP	DAWH-5NB,D15,L35,NYLON66,NTR	SNA
CIS	6502-000136	CABLE CLAMP	DAWS-2NB,ID17.5,-,NTR,NYLON66	SNA
CIS	BH66-00002A	SHAFT-POWER	AN19JS,ABS V0	
CIS	BH72-60765A	GUIDE-POWER	CSM92*,ABS,V0,IV16	SNA
CIS1	0202-001044	SOLDER-WIRE.	S63S-W3.0,S63S,D3,63Sn/37Pb,-	SNA
CIS12	BH73-60304C	RUBBER-SUPPORT	DP15LT,CR V0,GRAY,-,14*7*10,-,-	SNA
CIS13	BH68-00001A	LABEL-MARK CDT	ART-PAPER 100G,-,WHT,BLK,-,ALL,CDT	SNA
CIS16	BH61-00006A	SUPPORT-PCB	DP17LS,NYLON66,-,-,-,-,-	SNA
CIS2	0202-001046	SOLDER-WIRE FLUX	CF-110VH-2A,-,-,-,-	SNA
CIS3	0202-001222	SOLDER-WIRE FLUX	RS-107,RS60-1.2AA,D1.2,SN60/PB40,-	SNA
CIS4	0204-001095	THINNER	#4520,-,-,-	SNA
CIS9	BH71-00141A	SHIELD-BOTTOM	AQ19FS,SECC,T1.0	SNA
CN201	3711-003895	CONNECTOR-HEADER	BOX,13P,1R,2mm,STRAIGHT,SN	
CN202	3711-003873	CONNECTOR-HEADER	BOX,7P,1R,2mm,STRAIGHT,SN	SNA
CN203	3711-004379	CONNECTOR-HEADER	BOX,4P,1R,2MM,STRAIGHT,SN	SNA
CN304	3711-000885	CONNECTOR-HEADER	3WALL,3P,1R,2.5mm,STRAIGHT,SN	
CN403	3711-003989	CONNECTOR-HEADER	NOWALL,4P,1R,8mm,STRAIGHT,SN	△
CN601	3721-001028	PLUG-AC POWER	3P,-,-,NI	
CORE_FBT	3301-000233	CORE-FERRITE	AC,18X9.6X12MM,1500,2800GAUSS	
D406	0402-001521	DIODE-RECTIFIER	GRD07-17,1700,1.3A,DO-201AD,TP	
D611	0402-000016	DIODE-RECTIFIER	UF5404,400V,3A,DO-201AD,TP	
FUSE	3601-001302	FUSE-AXIAL LEAD	250V,3.15A,SLOW-BLOW,CERAMIC,5X20MM	SNA
G2_WIRE	BH39-00232A	CBF-HARNESS	DP17MO,UL1032,UL/CSA,1P,290MM,RED,AWG22,YHF800-1,-,-,-,-,-,-,-,CBF-CONN ASS'Y	
H/S+FBT	6003-000122	SCREW-TAPTITE	BH,+B,M4,L12,ZPC(YEL),SWRCH18	
IC201_SOCKET	3704-001071	SOCKET-IC	42P,DIP,SN,1.778mm	
IC401	1204-002027	IC-DEF. PROCESSOR	S1D2519X01,SDIP,32P,400MIL,PLASTIC,13.2V,1.2W,-20TO+75C,ST,-	
IC602	1203-000243	IC-POS.FIXED REG.	7812A,TO-220,3P,-,PLASTIC,11.5	
IC604	0604-001018	PHOTO-COUPLER	DAR-TR,63-125%,200mW,DIP-4,ST	
L401	BH27-00135A	COIL CHOKE	120UH,CDTMO,120UH,10%,0.23OHM,5A,AR8X25,65.5TS,18X40MM,11MM,USTC0.12X20,TR,-10CT	
L402	BH27-00134A	COIL CHOKE	100UH,CDTMO,100UH,10%,0.20HM,5.0A,AR8X25,60.5TS,18X40MM,11MM,USTC0.12X20,TR,-10C	
L403	BH27-20342Y	COIL-CHOKE	-,2.7MH,15%,DR8*11,-,-,-,-,4.0OHM,-,-,-,BULK	
L405	AA27-10001A	COIL CHOKE	-,82uH,K,20,0.8A,ST,82UH-K(ROB	
L406	BH27-00133A	COIL LINEARITY	6.7UH,6.7UH,DR14X15 C:4.9,7.0MM,15X15X39MM,14X9.5T,27TS,TR,12%,0.01OHM	
L601	BH27-00061A	COIL FILTER	-,33.0mH,0.1ohm,72Ts,28.*28,-,BK,SQE-2828,3A,-,-	
OP201	0601-001656	LED	ROUND,GRN,4.8X4.6MM,5,72NM,6X12.5MM	
Q403	0505-001689	FET-SILICON	IRFU210B,N,200V,2.7A,1.5OHM,2.5W,I-PAK	
Q409	0505-001676	FET-SILICON	IRFU230B,N,200V,7.5A,0.4OHM,2.5W,I-PAK	
Q421	0505-001676	FET-SILICON	IRFU230B,N,200V,7.5A,0.4OHM,2.5W,I-PAK	
Q609	0502-001138	TR-POWER	KSB1366,PNP,25W,TO-220F,BK,100	
R415	2006-001118	R-CEMENT	430OHM,5%,5W,CA,BK,22X9.5X6.5MM	
RL401	3501-001246	RELAY-POWER	12V,-,-,1C,10MS,5MS	
RL601	3501-001111	RELAY-POWER	12Vdc,250mW,5A,1FormA,15mS,5mS	
SH/B+SH/PB	6003-000010	SCREW-TAPTITE	BWH,+B,M3,L10,ZPC(YEL),SWRCH1	
SIGNAL	BH39-00414A	CBF SIGNAL	AN19*,15P/06P,07P,20276-N,1500MM,UL20276,IVORY,D-SUB/MALE,ATT. TYPE	

7 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
SW601	3403-001132	SWITCH-PUSH	30VDC,0.3A,DPST,SELF LOCK,-	
T401	BH26-00090B	TRANS HORIZ.DRIVE	EI-1916,AN193,7P,35.0MH,185TS/13TS/95TS,73.0UH,7.5/0.050HM,PL3,EI-1916,170UH MAX	△
T501	BH26-00150A	TRANS FBT	FQM19A007,AN19L,1.13MH,SM-19C,FUR3657,137V,14P,-10 -60,BK,27KV	△
T502	BH26-00147A	TRANS-FOCUS	EE1916,PN17L(TOSHIBA),5P,1.7MH MIN,-,112MH MIN,-,0.850HM/150HM MAX,-,PL3,EE1	
T601	BH26-00146A	TRANS SWITCHING	EER3541,AN19LS,90 -264,PL3,PM2A,EER3541,320UH,102UH	
T602	BH26-00141A	TRANS-SYNC	AR0615(L-81),AN17L,5P,200UH,200UH,1.30 OHM,L-81,AR0630, BAR,18*13*18.5,BK	
TH601	1404-001264	THERMISTOR-PTC	4.5OHM,+30/-20%,220V,290VAC,21A,-,TR	
TH602	1404-001020	THERMISTOR-NTC	8ohm,15%,-,17mW/C,BK	
VR401	2103-001049	VR-SEMI	100ohm,30%,1/5W,SIDE	
-	BH97-00330Q	ASSY MICOM	CA19JS,CA19JS-09E5/0503	
CIS	BH46-00006D	S/W MICOM	CA19JS	SNA
IC201	0903-001194	IC-MICROCONTROLLER	3P863,8Bit,SDIP,42P,600MIL,12MHz,ST,CMOS,PLASTIC,5V,-,40to+85C,1040BYTE,48KBYTE	
-	BH97-00397A	ASSY AUTO-MAIN	CA19JS,CA19JS-09E/0503	SNA
BD201	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD202	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD301	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD401	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD402	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD403	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD405	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD406	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD555	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD601	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD602	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD603	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
C201	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	
C202	2201-000389	C-CERAMIC,DISC	0.022nF,5%,50V,NP0,TP,5x3,5	
C203	2201-000389	C-CERAMIC,DISC	0.022nF,5%,50V,NP0,TP,5x3,5	
C205	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C209	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C211	2201-000146	C-CERAMIC,DISC	0.1nF,5%,50V,SL,TP,5x3,5,5	
C212	2201-000017	C-CERAMIC,DISC	1nF,10%,50V,Y5P,TP,5x3,5,5	
C213	2401-000384	C-AL	10uF,20%,100V,GP,TP,6.3x11,5mm	
C214	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	
C215	2201-000146	C-CERAMIC,DISC	0.1nF,5%,50V,SL,TP,5x3,5,5	
C217	2202-002009	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,2.3X3	
C224	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C225	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C301	2305-000237	C-FILM,MPEF	1uF,5%,63V,TP,7.5x15.5mm,5mm	
C303	2202-002008	C-CERAMIC,MLC-AXIAL	10nF,+80-20%,50V,Y5V,TP,2.3X3.	
C305	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	
C306	2401-000852	C-AL	220uF,20%,35V,GP,TP,8x11.5mm,5	
C307	2305-000237	C-FILM,MPEF	1uF,5%,63V,TP,7.5x15.5mm,5mm	
C308	2301-000013	C-FILM,PEF	4.7nF,5%,100V,TP,10.5x12.5x6.5	
C309	2202-000252	C-CERAMIC,MLC-AXIAL	4.7nF,10%,50V,X7R,TP,2.5x4.3,-	
C310	2301-000188	C-FILM,PEF	1nF,5%,100V,TP,10.5x12.5x6.5,5	
C312	2401-001017	C-AL	3.3UF,20%,50V,BP,TP,5X11,5	
C313	2301-000010	C-FILM,PEF	100nF,5%,100V,TP,11.5x12.5mm,5	
C406	2301-000004	C-FILM,PEF	2.2nF,5%,100V,TP,5.5X10X2.9,5m	
C407	2401-003826	C-AL	220UF,20%,63V,LR,TP,10X25MM,5	
C408	2201-000285	C-CERAMIC,DISC	1nF,10%,1kV,Y5P,TP,8x5,5	
C410	2401-000050	C-AL	10uF,20%,16V,GP,TP,5x11,2.5	
C411	2301-000180	C-FILM,PEF	18nF,0.05,100V,TP,7.2x4.5x8.0m	

Loc. No.	Code No.	Description	Specification	Remarks
C412	2301-000519	C-FILM,PEF	3.3nF,5%,100V,TP,5.8x3x12.5,5m	
C413	2401-001012	C-AL	3.3UF,20%,50V,BP,TP,16X25,7.5	
C414	2401-001334	C-AL	470nF,20%,50V,GP,TP,5x11,2.5	
C415	2201-000012	C-CERAMIC,DISC	0.22nF,10%,1kV,Y5P,TP,6.3x5,5	
C416	2301-000010	C-FILM,PEF	100nF,5%,100V,TP,11.5x12.5mm,5	
C417	2301-000312	C-FILM,PEF	8.2nF,5%,100V,TP,6x12.5mm,5mm	
C419	2309-000106	C-FILM,MPE-PPF	2.2nF,5%,1.6KV,TP,23x16x9,7.5m	⚠
C420	2301-001306	C-FILM,PPF	2.5NF,3%,1.6KV,TP,21.5X15.5X8.5MM,7.5	⚠
C421	2301-001341	C-FILM,PPF	3.3nF,5%,630V,TP,17.4x10x5.4mm,7.5	
C423	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C425	2306-000134	C-FILM,MPPF	150nF,5%,400V,TP,19x17x11,7.5m	
C427	2306-000179	C-FILM,MPPF	300nF,5%,250V,TP,20x18.5x10.5,	
C429	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C431	2301-001259	C-FILM,MPPF	100nF,5%,400V,TP,19x8x16,7.5mm	
C433	2301-001594	C-FILM,PPF	12NF,5%,250V,TP,19X10X5.5MM,7.5	
C436	2201-000469	C-CERAMIC,DISC	0.33nF,10%,500V,Y5P,TP,5.5x3,5	
C437	2306-000127	C-FILM,MPPF	120nF,5%,400V,TP,21.5x17mm,5mm	
C441	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C442	2301-001423	C-FILM,MPPF	82nF,5%,250V,TP,16x10x6mm,7.5	
C445	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C446	2201-000647	C-CERAMIC,DISC	0.068nF,5%,500V,NP0,TP,8x3.5mm,5	
C447	2201-000647	C-CERAMIC,DISC	0.068nF,5%,500V,NP0,TP,8x3.5mm,5	
C450	2305-000178	C-FILM,MPEF	10nF,5%,100V,TP,-,5mm	
C461	2401-002299	C-AL	4.7uF,20%,50V,GP,TP,5x7,5	
C462	2401-000031	C-AL	47uF,20%,16V,GP,TP,5x11,5	
C463	2202-002009	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,2.3X3	
C464	2202-000573	C-CERAMIC,MLC-RADIAL	820pF,5%,50V,NP0,TP,5.1x3.2x5.	
C465	2401-002299	C-AL	4.7uF,20%,50V,GP,TP,5x7,5	
C466	2301-000106	C-FILM,PEF	1.5nF,0.05,100V,TP,10.5*12.5*6	
C467	2401-000597	C-AL	1uF,20%,50V,GP,TP,4x7mm,1.5mm	
C468	2301-000148	C-FILM,PEF	10nF,5%,100V,TP,7x3.2x7mm,5mm	⚠
C469	2301-000188	C-FILM,PEF	1nF,5%,100V,TP,10.5x12.5x6.5,5	
C471	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	
C472	2401-000010	C-AL	220uF,20%,16V,GP,-,6.3x11mm,2.	
C473	2202-002009	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,2.3X3	
C491	2401-000603	C-AL	1uF,20%,50V,GP,TP,5x11,5	
C494	2401-000031	C-AL	47uF,20%,16V,GP,TP,5x11,5	
C500	2401-000059	C-AL	220nF,20%,50V,GP,-,5x11,5	⚠
C503	2401-001176	C-AL	33uF,20%,25V,GP,TP,5x11,5	
C508	2401-000638	C-AL	2.2uF,20%,350V,WT,TP,10x12.5mm	
C509	2401-000998	C-AL	3.3UF,20%,250V,GP,TP,8X11.5MM,5	
C510	2301-000284	C-FILM,PEF	47nF,5%,100V,TP,8.5x12.5mm,5mm	
C512	2305-000310	C-FILM,MPEF	22nF,5%,250V,TP,14.5x8.8mm,7.5	
C513	2201-000291	C-CERAMIC,DISC	1nF,10%,500V,Y5P,TP,7.5x3.5,5	
C514	2201-000291	C-CERAMIC,DISC	1nF,10%,500V,Y5P,TP,7.5x3.5,5	
C515	2201-000154	C-CERAMIC,DISC	10nF,+80-20%,2KV,Y5P,TP,20x5,10	
C541	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C551	2401-000913	C-AL	22uF,20%,16V,GP,TP,5x11,5	
C552	2201-000132	C-CERAMIC,DISC	0.1nF,10%,500V,Y5P,TP,6.5x3,5	
C603	2201-000023	C-CERAMIC,DISC	2.2nF,20%,125V,Y5U,TP,11x7,5	
C604	2201-000023	C-CERAMIC,DISC	2.2nF,20%,125V,Y5U,TP,11x7,5	
C607	2202-002009	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,2.3X3	
C609	2401-000962	C-AL	22uF,20%,50V,GP,TP,5x11,5	
C610	2202-000252	C-CERAMIC,MLC-AXIAL	4.7nF,10%,50V,X7R,TP,2.5x4.3,-	
C611	2401-000611	C-AL	1uF,20%,50V,WT,TP,5x11,5	

7 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
C612	2401-000611	C-AL	1uF,20%,50V,WT,TP,5x11,5	
C613	2201-000012	C-CERAMIC,DISC	0.22nF,10%,1kV,Y5P,TP,6.3x5,5	
C614	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C617	2201-000023	C-CERAMIC,DISC	2.2nF,20%,125V,Y5U,TP,11x7,5	
C618	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	
C619	2201-000469	C-CERAMIC,DISC	0.33nF,10%,500V,Y5P,TP,5.5x3,5	
C620	2401-003826	C-AL	220UF,20%,63V,LR,TP,10X25MM,5	
C621	2401-001585	C-AL	47uF,20%,50V,WT,TP,8x11.5,5	
C622	2401-000703	C-AL	2200uF,20%,25V,GP,-,12.5x25mm,	
C623	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	
C626	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	
C627	2401-000142	C-AL	1000uF,20%,16V,WT,TP,10x20,5	
C628	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	
C635	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C651	2301-000287	C-FILM,PEF	5.6nF,5%,100V,TP,10.5x12.5x6.5	
C652	2301-000148	C-FILM,PEF	10nF,5%,100V,TP,7x3.2x7mm,5mm	
C653	2301-000005	C-FILM,PEF	33nF,5%,100V,TP,5.8x12.5x3,5	
C654	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	
C655	2202-002009	C-CERAMIC,MLC-AXIAL	100nF,+80-20%,50V,Y5V,TP,2.3X3	
C657	2301-000016	C-FILM,PEF	22nF,5%,100V,TP,7.2x4.5x9.0mm,	
C658	2301-000013	C-FILM,PEF	4.7nF,5%,100V,TP,10.5x12.5x6.5	
CIS5	0203-001199	TAPE-KRAFT	#53110,T0.1,W6,L2000M,BRN	SNA
CIS6	0203-001200	TAPE-PAPER	#53128,T0.15,W5.5,L2000M,BEIGE	SNA
CIS7	0203-001201	TAPE-PAPER	#FB-300,T0.16,W6,L2000M,R/BLU	SNA
CN401	BH71-40300A	PIN-HINGE	BRASS,D2.361,HEAT/SINK,SN	SNA
CN402	BH71-40300A	PIN-HINGE	BRASS,D2.361,HEAT/SINK,SN	SNA
CN603	3711-000217	CONNECTOR-HEADER	1WALL,2P/(3P),1R,3.96MM,STRAIGHT,SN,-	
D242	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
D301	0402-000274	DIODE-RECTIFIER	UF4004,400V,1A,DO-41,TP	
D401	0402-000274	DIODE-RECTIFIER	UF4004,400V,1A,DO-41,TP	
D402	0402-000006	DIODE-RECTIFIER	1N4007GP,1000V,1A,DO-41,TP	
D404	0402-000006	DIODE-RECTIFIER	1N4007GP,1000V,1A,DO-41,TP	
D405	0402-000208	DIODE-RECTIFIER	EK-04,40V,1.5A,DO-41	
D407	0402-001118	DIODE-RECTIFIER	UF1G,400V,1.2A,DO-204AL,TP	
D410	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41,TP	
D411	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41,TP	
D412	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41,TP	
D413	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41,TP	
D418	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D419	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D420	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D423	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D430	0402-000006	DIODE-RECTIFIER	1N4007GP,1000V,1A,DO-41,TP	
D432	0402-000274	DIODE-RECTIFIER	UF4004,400V,1A,DO-41,TP	
D447	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D500	0402-000252	DIODE-RECTIFIER	RGPO2-16E,1.6KV,0.5A,DO-41,TP	
D501	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D502	0402-000252	DIODE-RECTIFIER	RGPO2-16E,1.6KV,0.5A,DO-41,TP	
D504	0402-000017	DIODE-RECTIFIER	RGPO2-12,1200V,0.5A,DO-204AL,T	
D509	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D511	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D512	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D515	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D516	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D518	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	

Loc. No.	Code No.	Description	Specification	Remarks
D519	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D540	0402-000252	DIODE-RECTIFIER	RGPO2-16E,1.6KV,0.5A,DO-41,TP	
D601_1	0402-001522	DIODE-RECTIFIER	GPP20J,600V,2A,DO-15,TP	
D601_2	0402-001522	DIODE-RECTIFIER	GPP20J,600V,2A,DO-15,TP	
D601_3	0402-001522	DIODE-RECTIFIER	GPP20J,600V,2A,DO-15,TP	
D601_4	0402-001522	DIODE-RECTIFIER	GPP20J,600V,2A,DO-15,TP	
D602	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D604	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	
D605	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	
D606	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41,TP	
D607	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
D608	0402-001194	DIODE-RECTIFIER	UG2D,200V,2A,DO-204AC,TP	
D610	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	
D612	0402-000274	DIODE-RECTIFIER	UF4004,400V,1A,DO-41,TP	
D613	0406-001062	DIODE-TVS	P6KE200A,190/200/210V,600W,CAS	
EY301	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY302	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY401	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY402	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY403	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY405	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY406	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY409	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY501	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY502	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY503	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY504	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY505	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY506	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY507	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY508	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY511	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY512	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY601	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY602	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY603	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY604	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY605	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY606	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY607	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY608	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY609	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY610	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
EY611	6042-000002	EYELET	ID1.5,OD2,L3.1,SN,BSS3-E/EH	SNA
G2	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
GT603	BH71-40300A	PIN-HINGE	BRASS,D2.36",HEAT/SINK,SN	SNA
GT604	BH71-40300A	PIN-HINGE	BRASS,D2.36",HEAT/SINK,SN	SNA
IC202	1103-001150	IC-EEPROM	524C80D81,8KBit,DIP,8P,300MIL,10mS,5V,10%,PLASTIC,-25to+70C,10uA,CMOS,ST	
IC603	1203-002653	IC-POSI.FIXED REG.	78DL05,TO-92,3P,4.5X4.5MM,PLASTIC,4.8/5.2V,625MW,-40TO+85C,150MA,-,TP	
IC605	1203-000002	IC-POSI.ADJUST REG.	431,TO-92,3P,-,PLASTIC,2.44/2.	
JP1	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP103	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP104	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP105	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP107	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	

7 Electrical Parts List

[illegible]

Loc. No.	Code No.	Description	Specification	Remarks
JP53	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	SNA
JP54	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP55	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP57	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP58	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP61	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP63	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP64	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP68	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP7	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP8	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP82	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP84	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP86	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP90	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP92	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP93	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP97	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP99	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
L501	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
MP2.0	BH41-00224A	PCB MAIN	AN19 _MAIN,FR1,1,1.6T,247*247,AN19,1	
Q_S1	0501-000412	TR-SMALL SIGNAL	KSP42,NPN,625mW,TO-92,-,40	
Q_S3	0501-000412	TR-SMALL SIGNAL	KSP42,NPN,625mW,TO-92,-,40	
Q_S4	0501-000412	TR-SMALL SIGNAL	KSP42,NPN,625mW,TO-92,-,40	
Q301	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q302	0501-000122	TR-SMALL SIGNAL	2N3904,NPN,625mW,TO-92,TP,100-300	
Q303	0501-000581	TR-SMALL SIGNAL	2N3906,PNP,625mW,TO-92,TP,100-300	
Q401	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q405	0501-000581	TR-SMALL SIGNAL	2N3906,PNP,625mW,TO-92,TP,100-300	
Q406	0501-000581	TR-SMALL SIGNAL	2N3906,PNP,625mW,TO-92,TP,100-300	
Q407	0501-000140	TR-SMALL SIGNAL	2N5551,NPN,625mW,TO-92,TP,80-250	
Q420	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q423	0501-000303	TR-SMALL SIGNAL	KSA733,PNP,250mW,TO-92,TP,120-240	
Q501	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q502	0501-000143	TR-SMALL SIGNAL	2N6520,PNP,625mW,TO-92,TP,30-200	
Q503	0501-000122	TR-SMALL SIGNAL	2N3904,NPN,625mW,TO-92,TP,100-300	
Q504	0501-000122	TR-SMALL SIGNAL	2N3904,NPN,625mW,TO-92,TP,100-300	
Q551	0501-000413	TR-SMALL SIGNAL	KSP44,NPN,625mW,TO-92,TP,50-200	
Q601	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q604	0501-000404	TR-SMALL SIGNAL	KSD1616-Y,NPN,750mW,TO-92,TP,135-270	
Q608	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
Q610	0501-000586	TR-SMALL SIGNAL	KSC945,NPN,250mW,TO-92,TP,120-240	
R_S1	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R_S3	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R_S4	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R200	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R201	2001-000522	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R202	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R203	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R204	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R206	2001-000435	R-CARBON	1MOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R207	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R208	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R209	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R214	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

7 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R215	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R216	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R217	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R218	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R220	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R221	2001-001015	R-CARBON	9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R222	2001-001015	R-CARBON	9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R223	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R224	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R225	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R226	2001-000878	R-CARBON	6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R227	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R228	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R229	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R230	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R231	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R232	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R233	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R236	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R238	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R239	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R240	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R301	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R304	2004-001136	R-METAL	6.8Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R306	2004-001022	R-METAL	5.6Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R307	2001-001048	R-CARBON(S)	1.2OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R308	2001-000109	R-CARBON(S)	470OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R309	2004-004981	R-METAL	3ohm,2%,1/4W,AA,TP,2.4x6.4mm	
R310	2004-001226	R-METAL	750ohm,1%,1/4W,AA,TP,2.4x6.4mm	
R311	2004-001661	R-METAL	3Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R315	2004-004981	R-METAL	3ohm,2%,1/4W,AA,TP,2.4x6.4mm	
R320	2001-000313	R-CARBON	11KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R321	2001-000947	R-CARBON	7.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R322	2001-000019	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R323	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R324	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R325	2001-001079	R-CARBON(S)	15OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R326	2001-001116	R-CARBON(S)	27OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R401	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R402	2004-001136	R-METAL	6.8Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R403	2004-000679	R-METAL	2Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R404	2001-000773	R-CARBON	470KOHM,5%,1/8W,AA,TP,1.8X3.2MM	△
R406	2001-000522	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R409	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R411	2001-001096	R-CARBON(S)	2.2OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R412	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	△
R413	2003-000400	R-METAL OXIDE(S)	0.5ohm,5%,2W,AA,TP,4x12mm	△
R416	2001-000107	R-CARBON(S)	150KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R417	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R418	2001-001024	R-CARBON	910OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R419	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R420	2001-000962	R-CARBON	75KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
R421	2001-000878	R-CARBON	6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R422	2001-001006	R-CARBON	82OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R423	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description	Specification	Remarks
R424	2004-001329	R-METAL	9.1Kohm,1%,1/4W,AA,TP,2.4x6.4mm	
R425	2001-000119	R-CARBON	680OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R426	2001-000110	R-CARBON	100HM,5%,1/4W,AA,TP,2.4X6.4MM	
R427	2001-000591	R-CARBON	3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R428	2003-000608	R-METAL OXIDE(S)	270ohm,5%,3W,AA,TP,6x16mm	
R430	2001-001078	R-CARBON(S)	15KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R431	2003-000411	R-METAL OXIDE(S)	0.82ohm,5%,2W,AA,TP,4x12mm	
R432	2001-000020	R-CARBON(S)	22OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R435	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R439	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R443	2003-000671	R-METAL OXIDE(S)	390ohm,5%,2W,AA,TP,4x12mm	
R444	2001-001050	R-CARBON(S)	1.5KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R445	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),--AWG22(0.	
R447	2001-001153	R-CARBON(S)	47OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R452	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R457	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R458	2001-000028	R-CARBON(S)	100OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R460	2001-000019	R-CARBON(S)	100HM,5%,1/2W,AA,TP,2.4X6.4MM	
R461	2001-001153	R-CARBON(S)	47OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R462	2001-001153	R-CARBON(S)	47OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R463	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R464	2001-000010	R-CARBON	68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R465	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R466	2001-000010	R-CARBON	68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R500	2001-000478	R-CARBON	2.7OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R501	2001-000864	R-CARBON	56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R502	2004-000781	R-METAL	330Kohm,1%,1/4W,AA,TP,2.4x6.4mm	⚠
R503	2004-000796	R-METAL	33Kohm,1%,1/4W,AA,TP,2.4x6.4mm	⚠
R504	2001-000522	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	⚠
R505	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R507	2001-000605	R-CARBON	3.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM	⚠
R508	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	⚠
R514	2001-001182	R-CARBON(S)	7.5KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R515	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R516	2002-001074	R-COMPOSITION	100Kohm,5%,1/2W,AA,TP,4.0x10mm	
R518	2001-001071	R-CARBON(S)	12KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R521	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R523	2002-001010	R-COMPOSITION	1.8Mohm,5%,1/2W,AA,TP,3.7x9mm	
R524	2002-001097	R-COMPOSITION	33Kohm,5%,1/2W,AA,TP,4.0x10mm	
R525	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R526	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),--AWG22(0.	
R527	2001-000508	R-CARBON	220KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R528	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R529	2001-000490	R-CARBON	200OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R532	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R533	2001-000977	R-CARBON	8.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R534	2002-001075	R-COMPOSITION	30Mohm,5%,1/2W,AA,TP,4.0x10mm	
R535	2002-001073	R-COMPOSITION	15Mohm,5%,1/2W,AA,TP,4.0x10mm	
R536	2001-000723	R-CARBON	4.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R537	2001-000563	R-CARBON	27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R538	2001-000411	R-CARBON	18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R551	2001-000530	R-CARBON	240KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
R552	2001-000495	R-CARBON	20KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
R553	2001-000642	R-CARBON	330KOHM,5%,1/2W,AA,TP,3.3X9MM	
R554	2002-001049	R-COMPOSITION	240Kohm,5%,1/2W,AA,TP,3.9x9mm	

7 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R555	2001-000958	R-CARBON	750OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R556	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R561	2001-000117	R-CARBON(S)	680OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R562	2003-000650	R-METAL OXIDE(S)	330ohm,5%,2W,AA,TP,4x12mm	
R600	2001-001129	R-CARBON(S)	330KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R601	2001-001129	R-CARBON(S)	330KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R602	2001-000023	R-CARBON	470HM,5%,1/4W,AA,TP,2.4X6.4MM	
R603	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R605	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R606	2001-000008	R-CARBON	15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R607	2003-000014	R-METAL OXIDE(S)	10Kohm,5%,3W,AA,TP,6x16mm	
R609	2002-001068	R-COMPOSITION	180Kohm,5%,1/2W,AA,TP,3.9x9mm	
R610	2002-001068	R-COMPOSITION	180Kohm,5%,1/2W,AA,TP,3.9x9mm	
R611	2001-000019	R-CARBON(S)	100HM,5%,1/2W,AA,TP,2.4X6.4MM	
R612	2003-000738	R-METAL OXIDE(S)	56Kohm,5%,2W,AA,TP,4x12mm	
R613	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R614	2001-000037	R-CARBON(S)	330OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R615_1	2001-001117	R-CARBON(S)	2KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R615_2	2001-001117	R-CARBON(S)	2KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R616	2001-001108	R-CARBON(S)	22KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R618	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R619	2003-000471	R-METAL OXIDE(S)	10ohm,5%,2W,AA,TP,4x12mm	
R620	2001-000354	R-CARBON	150KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
R630	2001-000786	R-CARBON	47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R631	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
R632	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R633	2001-003192	R-CARBON(S)	0.82OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R634	2001-003192	R-CARBON(S)	0.82OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R651	2004-000193	R-METAL	100Kohm,1%,1/4W,AA,TP,2.4x6.4m	
R652	2001-000890	R-CARBON	6.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R653	2004-000899	R-METAL	4.7Kohm,1%,1/4W,AA,TP,2.4x6.4m	⚠
R654	2004-000746	R-METAL	300ohm,1%,1/4W,AA,TP,2.4x6.4mm	⚠
R655	2001-000508	R-CARBON	220KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R656	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R657	2001-000995	R-CARBON	820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R658	2001-000034	R-CARBON	220OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R659	2001-000577	R-CARBON	2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R660	2001-000577	R-CARBON	2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R663	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
RM_S1	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM_S3	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM_S4	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
SK501	4715-001055	SURGE ABSORBER	1kV,+50-10%,--,-,RADIAL	
SK502	4715-001055	SURGE ABSORBER	1kV,+50-10%,--,-,RADIAL	
X201	2801-000006	CRYSTAL-UNIT	12MHz,50ppm,28-AAM,S,35ohm,BK	
ZD201	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD202	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD203	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD204	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD205	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD206	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD207	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD209	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD210	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD211	0403-000348	DIODE-ZENER	UZ36B,36V,33-39V,500mW,DO-35,T	

Loc. No.	Code No.	Description	Specification	Remarks
ZD212	0403-000355	DIODE-ZENER	UZ5.1BSB,4.97-5.18V,500MW,DO-35,TP	
ZD500	0403-000337	DIODE-ZENER	UZ24BH,24V,24.2-25.7V,500mW,DO	
ZD600	0403-000753	DIODE-ZENER	MTZJ27D,27V,26.29-27.64V,500mW	
HS301	BH99-00044A	ASSY HEAT/SINK	HS V.IC,SCREW+NUT,KA2142,-,-,OIL SILICON	SNA
CIS	0205-001027	OIL-SILICON	G746,-,-	SNA
CIS	1204-001508	IC-VERTICAL DEF.	KA2142,SIP,10P,-,PLASTIC,35V,15W,-20TO+70C,ST,VERTICAL DEFLECTION	
CIS	6006-001008	SCREW-ASS'Y MACH	WSP,BH,+,M3,L10,ZPC(YEL),SWRCH	SNA
CIS	6021-000118	NUT-HEXAGON	1C,M3,ZPC(YEL),SM20C	SNA
CIS	BH62-00050A	HEAT SINK-V IC	AQ17,A1050S,T1.0,H60,L77,-,-,-	SNA
HS409	BH99-10019U	ASSY HEAT/SINK	HS TR,SOLDER,MUR460,-,-,-	SNA
CIS	0202-001044	SOLDER-WIRE.	S63S-W3.0,S63S,D3,63Sn/37Pb,-	SNA
CIS	0402-001191	DIODE-RECTIFIER	MUR460,600V,4A,CASE267-03,BK	
CIS	BH62-30024B	HEAT SINK-IC	SPC-1,T1,SN COATING,-	SNA
HS401	BP96-00067B	ASSY HEAT SINK P	H/S TR,SCREW+NUT,IRF640B,OIL SILICON	SNA
CIS	0205-001027	OIL-SILICON	G746,-,-	SNA
CIS	0505-001690	FET-SILICON	IRF640B,N,200V,18A,0.180HM,139W,TO-220	
CIS	6006-001008	SCREW-ASS'Y MACH	WSP,BH,+,M3,L10,ZPC(YEL),SWRCH	SNA
CIS	6021-000118	NUT-HEXAGON	1C,M3,ZPC(YEL),SM20C	SNA
CIS	BH62-30024A	HEAT SINK-TR	SPC,T1,SN,CFX1577L	SNA
HS402	BP96-00072B	ASSY HEAT SINK P	H/S TR,SPRING,IRF740B,OIL SILICON	SNA
CIS	0205-001027	OIL-SILICON	G746,-,-	SNA
CIS	0505-001681	FET-SILICON	IRF740B,N,400V,10A,0.540HM,134W,TO-220	
CIS	BH61-00004A	SPRING ETC-TR	CDA,CDB,SUS304,-,-,-,-,T0.5,-,-,-	SNA
CIS	BH62-00016A	HEAT SINK-TR	A1050S,T1.0,-,DP17MO	SNA
HS501	BP96-00073G	ASSY HEAT SINK P	H/S FBT,SPRING,FJL6920,F10U170S,KSD1408,RUBBER,OIL SILICON	SNA
CIS	0205-001027	OIL-SILICON	G746,-,-	SNA
CIS	0402-001520	DIODE-RECTIFIER	FFAF10U170S,1700V,10A,TO-3PF-2L,ST	
CIS	0502-001224	TR-POWER	FJL6920,NPN,200000MW,TO-264,ST,5.5-8.5	
CIS	0502-001231	TR-POWER	KSD1408,NPN,25000MW,TO-220F,ST,120-240	
CIS	BH61-70003A	SPRING ETC	CVT4857,STS304-W1/2H,W3.8,-,L30,L30,-,T0.5,DEGRE,W3.8,STS304-W1/2H	SNA
CIS	BH62-00038A	HEAT SINK-FBT	TS17JS,A1050S,T2.0,-,-,-,-,-	SNA
CIS	BH73-00028A	SILICON/RUBBER-HS	CDT ALL,SILICON,26*33*TO.4,SR TC1370	SNA
HS609	BP96-00074B	ASSY HEAT SINK P	H/S TR,SOLDER,31DF4	SNA
CIS	0202-001044	SOLDER-WIRE.	S63S-W3.0,S63S,D3,63Sn/37Pb,-	SNA
CIS	0402-001273	DIODE-RECTIFIER	31DF4,400V,3A,DO-201AD,BK	
CIS	BH62-00051A	HEAT SINK-V IC	AQ17,SPC-1,T1.0,H60,L13,-,-,-	SNA
HS601	BP96-00075A	ASSY HEAT SINK P	H/S POWER,SPRING,FS6S0965,OIL SILICON	SNA
CIS	BH13-00027A	IC HYBRID	DP706C,5,-25 TO +85,TO-220-5L(FORMING),8.1A,35V,ST	
CIS	BH61-00004A	SPRING ETC-TR	CDA,CDB,SUS304,-,-,-,-,T0.5,-,-,-	SNA
CIS	BH62-00052A	HEAT SINK-POWER	M782,A1050S,T1.0,W25,L55,-,BH62,-	SNA
CIS	BH62-20001B	TUBE-RUBBER	CSQ4357,W25*L20*TO.45,-,-,-,-	SNA

7-2 Video PCB Parts

Loc. No.	Code No.	Description	Specification	Remarks
-	BH94-00880B	ASSY PCB VIDEO	IG19NOP(PFC),HP	SNA
CIS	6502-000001	CABLE CLAMP	DAWH-5NB,D15,L35,NYLON66,NTR	SNA
CIS	6502-000127	CABLE CLAMP	DAWH-18NB,ID15,-,NYLON66,NTR	SNA
CIS	BH62-00033A	HEAT SINK-VIDEO	PN17MT,A6063S,T1.0,W24,L50,-,-,-	SNA
CIS	BH68-00001A	LABEL-MARK CDT	ART-PAPER 100G,-,WHT,BLK,-,ALL,CDT	SNA
CIS	BH75-00047A	UNIT-SHIELD VIDEO-CAP	CL17LO,SPTT T0.3,-,-,-	SNA
CIS	BH71-00006B	SHIELD VIDEO-CAP	CL17LO,SPTT,0.2	SNA
CIS	BH71-10311A	EARTH PLATE	PBS 3/4H	SNA
CIS	BH75-00192H	UNIT-SHIELD VIDEO	DEL,-,SPTT,-,-,14,15,17,-	
CIS	BH61-00002A	SPRING ETC-VIDEO	CDB7907,STS H14,-,-,-,-,T1.0,-,-,-	SNA
CIS	BH71-00007A	SHIELD VIDEO	CDA4507,SPTT,T0.2	SNA
CIS	BH72-00024A	HOLDER-VIDEO	CDA4507,ABS,V0,IV16,NORMAL CRT	SNA
CIS	BH73-00014A	RUBBER-HOLDER(NORMAL)	DEL,SILICON V2,GRAY,-,-,-,NORMAL	
CIS1	0202-001044	SOLDER-WIRE.	S63S-W3.0,S63S,D3,63Sn/37Pb,-	SNA
CIS2	0202-001046	SOLDER-WIRE FLUX	CF-110VH-2A,-,-,-,-	SNA
CIS3	0202-001222	SOLDER-WIRE FLUX	RS-107,RS60-1.2AA,D1.2,SN60/PB40,-	SNA
CIS4	0204-001095	THINNER	#4520,-,-,-	SNA
CN101	3711-004228	CONNECTOR-HEADER	BOX,6P,1R,2MM,ANGLE,SN	
CN102	BH39-00015A	CBF-HARNESS	13P/14P,200MM,WHT/BLK/RED/BLU,UL1007,AWG26,SMH200-13/YBNH200-14	
H/S+SH/V	6003-000010	SCREW-TAPTITE	BWH,-,B,M3,L10,ZPC(YEL),SWRCH1	
IC102	1201-001832	IC-VIDEO AMP	S1D2518X01,SDIP,30P,-,-,18DB,PLASTIC,12V,1.2W,-25TO+75C,-,-,-,-,ST	
JW1	BH39-40306C	CBF-HARNESS	,60MM,BLK,1015,AWG22,-,-,-,-,-	
JW2	BH39-40306D	CBF-HARNESS	,80MM,BLK,1015,AWG22,-,-,-,-,-	
JW3	BH39-40305Y	CBF-HARNESS	,110MM,BLK,1015,AWG22,-,-,-,-,-	
SK101	3704-001142	SOCKET-CRT	10P,22.5PI,25.6PI,NI,-	
-	BH97-00401D	ASSY SMD-VIDEO	CA19J	SNA
C106	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
C107	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,2012	
C128	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,2012	
C129	2203-000239	C-CERAMIC,CHIP	0.1nF,5%,50V,NP0,TP,2012	
C130	2203-000239	C-CERAMIC,CHIP	0.1nF,5%,50V,NP0,TP,2012	
C134	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
C138	2203-001002	C-CERAMIC,CHIP	0.047nF,5%,50V,NP0,TP,2012	
C139	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
C145	2203-001105	C-CERAMIC,CHIP	6.8nF,10%,50V,X7R,TP,2012	
C147	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
CB01	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
CB02	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,2012	
CB04	2203-002793	C-CERAMIC,CHIP	1000nF,+80-20%,25V,Y5V,TP,2012	
CB10	2203-000634	C-CERAMIC,CHIP	0.022nF,5%,50V,NP0,TP,2012	
CG01	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
CG02	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,2012	
CG04	2203-002793	C-CERAMIC,CHIP	1000nF,+80-20%,25V,Y5V,TP,2012	
CG10	2203-000389	C-CERAMIC,CHIP	0.015nF,5%,50V,NP0,TP,2012	
CR01	2203-000204	C-CERAMIC,CHIP	100nF,10%,25V,X7R,TP,2012	
CR02	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,2012	
CR04	2203-002793	C-CERAMIC,CHIP	1000nF,+80-20%,25V,Y5V,TP,2012	
CR10	2203-000389	C-CERAMIC,CHIP	0.015nF,5%,50V,NP0,TP,2012	
DB01	0401-001056	DIODE-SWITCHING	MMBD4148SE,75V,200MA,SOT-23,TP	
DG01	0401-001056	DIODE-SWITCHING	MMBD4148SE,75V,200MA,SOT-23,TP	
DR01	0401-001056	DIODE-SWITCHING	MMBD4148SE,75V,200MA,SOT-23,TP	
IC101	1201-001791	IC-VIDEO AMP	-,SOP,24P,375MIL,-,-,PLASTIC,7V,0.8W,-20TO+80C,-,-,-,-,TR	
IC103	1204-001994	IC-OSD PROCESSOR	S5D2509X15,SOP,24P,375MIL,PLASTIC,5.25V,1.2W,-20TO+70C,TP,RUSSIA OSD	
L103	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
L105	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
L106	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
L107	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
L108	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
L109	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	

Loc. No.	Code No.	Description	Specification	Remarks
L111	2703-001334	INDUCTOR-SMD	1.5uH,10%,2x1.25x0.85mm	
R101	2007-001071	R-CHIP	6.8KOHM,5%,1/10W,DA,TP,2012	
R102	2007-000355	R-CHIP	12KOHM,5%,1/10W,DA,TP,2012	
R103	2007-001071	R-CHIP	6.8KOHM,5%,1/10W,DA,TP,2012	
R105	2007-000766	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R106	2007-000781	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R107	2007-001001	R-CHIP	510OHM,5%,1/10W,DA,TP,2012	
R108	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R109	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R111	2007-008393	R-CHIP	11MOHM,5%,0.100W,DA,TP,2012	
R116	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R117	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R118	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R119	2007-000290	R-CHIP	100OHM,5%,1/10W,DA,TP,2012	
R121	2007-001155	R-CHIP	750OHM,5%,1/10W,DA,TP,2012	
R122	2007-000300	R-CHIP	10KOHM,5%,1/10W,DA,TP,2012	
R123	2007-000241	R-CHIP	1.5KOHM,5%,1/10W,DA,TP,2012	
R128	2007-000981	R-CHIP	5.6KOHM,5%,1/10W,DA,TP,2012	
R129	2007-000355	R-CHIP	12KOHM,5%,1/10W,DA,TP,2012	
R130	2007-001071	R-CHIP	6.8KOHM,5%,1/10W,DA,TP,2012	
R132	2007-000468	R-CHIP	1KOHM,5%,1/10W,DA,TP,2012	
R133	2007-000468	R-CHIP	1KOHM,5%,1/10W,DA,TP,2012	
R139	2007-000766	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R140	2007-000766	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R141	2007-000766	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R142	2007-000766	R-CHIP	330OHM,5%,1/10W,DA,TP,2012	
R143	2007-000572	R-CHIP	220OHM,5%,1/10W,DA,TP,2012	
R145	2007-008393	R-CHIP	11MOHM,5%,0.100W,DA,TP,2012	
RB01	2007-001166	R-CHIP	75OHM,5%,1/10W,DA,TP,2012	
RB02	2007-000593	R-CHIP	22OHM,5%,1/10W,DA,TP,2012	
RB04	2007-000931	R-CHIP	470OHM,5%,1/10W,DA,TP,2012	
RB05	2007-000822	R-CHIP	390OHM,5%,1/10W,DA,TP,2012	
RB06	2007-000781	R-CHIP	33OHM,5%,1/10W,DA,TP,2012	
RB07	2007-000457	R-CHIP	18KOHM,5%,1/10W,DA,TP,2012	
RB10	2007-000572	R-CHIP	220OHM,5%,1/10W,DA,TP,2012	
RG01	2007-001166	R-CHIP	75OHM,5%,1/10W,DA,TP,2012	
RG02	2007-000593	R-CHIP	22OHM,5%,1/10W,DA,TP,2012	
RG04	2007-000931	R-CHIP	470OHM,5%,1/10W,DA,TP,2012	
RG05	2007-000822	R-CHIP	390OHM,5%,1/10W,DA,TP,2012	
RG06	2007-001247	R-CHIP	91OHM,5%,1/10W,DA,TP,2012	
RG07	2007-000457	R-CHIP	18KOHM,5%,1/10W,DA,TP,2012	
RG10	2007-000572	R-CHIP	220OHM,5%,1/10W,DA,TP,2012	
RR01	2007-001166	R-CHIP	75OHM,5%,1/10W,DA,TP,2012	
RR02	2007-000593	R-CHIP	22OHM,5%,1/10W,DA,TP,2012	
RR04	2007-000931	R-CHIP	470OHM,5%,1/10W,DA,TP,2012	
RR05	2007-000822	R-CHIP	390OHM,5%,1/10W,DA,TP,2012	
RR06	2007-001013	R-CHIP	51OHM,5%,1/10W,DA,TP,2012	
RR07	2007-000457	R-CHIP	18KOHM,5%,1/10W,DA,TP,2012	
RR10	2007-000572	R-CHIP	220OHM,5%,1/10W,DA,TP,2012	
-	BH97-00374F	ASSY AUTO-VIDEO	CA19JS	SNA
BD103	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD104	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD106	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD112	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
BD115	3301-000011	CORE-FERRITE BEAD	AA,3.5x1.0x5.7mm,1500,2375G	
C102	2201-000119	C-CERAMIC,DISC	100nF,+80-20%,50V,Y5V,TP,8x3,5	
C104	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	
C105	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	
C112	2401-003034	C-AL	220uF,20%,16V,WT,TP,8x11.5,5	

7 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
C113	2301-000312	C-FILM,PEF	8.2nF,5%,100V,TP,6x12.5mm,5mm	
C116	2401-003484	C-AL	10uF,20%,100V,LZ,TP,6.3X11.5	
C117	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C118	2401-000393	C-AL	10uF,20%,100V,WT,TP,8x11.5,5	
C119	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,TP,13.5x4mm,5	
C120	2401-000660	C-AL	2.2uF,20%,50V,GP,TP,5x11.5	
C121	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11.5	
C122	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11.5	
C125	2201-000341	C-CERAMIC,DISC	2.7nF,10%,2kV,Y5P,TP,14x6,7.5	
C126	2201-000119	C-CERAMIC,DISC	100nF,+80-20%,50V,Y5V,TP,8x3,5	
C127	2201-000014	C-CERAMIC,DISC	0.33nF,10%,1kV,Y5P,TP,6.3x5,5	
C131	2401-000010	C-AL	220uF,20%,16V,GP,-,6.3x11mm,2.	
C135	2401-002009	C-AL	100uF,20%,16V,GP,TP,6.3x7,5	
C146	2401-002009	C-AL	100uF,20%,16V,GP,TP,6.3x7,5	
C148	2401-002009	C-AL	100uF,20%,16V,GP,TP,6.3x7,5	
C149	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	
CB05	2301-000010	C-FILM,PEF	100nF,5%,100V,TP,11.5x12.5mm,5	
CB06	2305-000407	C-FILM,MPEF	470nF,5%,100V,TP,-,5mm	
CG05	2301-000010	C-FILM,PEF	100nF,5%,100V,TP,11.5x12.5mm,5	
CG06	2305-000407	C-FILM,MPEF	470nF,5%,100V,TP,-,5mm	
CIS5	0203-001199	TAPE-KRAFT	#53110,T0.1,W6,L2000M,BRN	SNA
CIS6	0203-001200	TAPE-PAPER	#53128,T0.15,W5.5,L2000M,BEIGE	SNA
CN_G2	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	SNA
CN_GND	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	SNA
CR05	2301-000010	C-FILM,PEF	100nF,5%,100V,TP,11.5x12.5mm,5	
CR06	2305-000407	C-FILM,MPEF	470nF,5%,100V,TP,-,5mm	⚠
D101	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
DB03	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DB04	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DB05	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
DG03	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DG04	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DG05	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
DR03	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DR04	0401-000004	DIODE-SWITCHING	1SS244,250V,625mA,DO-34,TP	
DR05	0401-000005	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	
EY1	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY2	6042-000001	EYELET	ID2.2,OD2.7,L3.1,SN,BSS3-E/EH	SNA
EY5	6042-000002	EYELET	ID1.5,OD2.L3.1,SN,BSS3-E/EH	SNA
EY6	6042-000002	EYELET	ID1.5,OD2.L3.1,SN,BSS3-E/EH	SNA
EY7	6042-000002	EYELET	ID1.5,OD2.L3.1,SN,BSS3-E/EH	SNA
EY8	6042-000002	EYELET	ID1.5,OD2.L3.1,SN,BSS3-E/EH	SNA
IC104	BH13-00022A	IC HYBRID-BIAS CLAMP	LM2480NA,PN15H/17L,8P,0to+70C,DIP,3mA,85V,ST	
IC106	1203-002653	IC-POS.FIXED REG.	78DL05,TO-92,3P,4.5X4.5MM,PLASTIC,4.8/5.2V,625MW,-40TO+85C,150MA,-,TP	
JP16	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP20	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP21	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP23	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP24	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP25	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP26	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP27	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP28	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP29	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP30	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP31	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP32	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP33	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP34	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP36	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	

Loc. No.	Code No.	Description	Specification	Remarks
JP37	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	SNA
JP39	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP40	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP43	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP47	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP51	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP53	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP57	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP61	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP62	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP66	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP70	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP71	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP73	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP74	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP75	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP77	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP85	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP86	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP87	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP92	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP93	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP94	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
JP95	BH39-40305U	CBF HARNESS	52MM,AWG22(0.6PI),-,-,AWG22(0.	
L101	2701-000187	INDUCTOR-AXIAL	4.7uH,10%,4.2x9.8mm	
L102	2701-001014	INDUCTOR-AXIAL	4.7uH,10%,3x7mm	
L104	2701-000002	INDUCTOR-AXIAL	100uH,10%,4.2x9.8mm	
LB10	2701-001051	INDUCTOR-AXIAL	680nH,10%,4.2x9.8mm	
LB11	2701-001065	INDUCTOR-AXIAL	0.22UH,10%,3X7MM	
LG10	2701-000190	INDUCTOR-AXIAL	470nH,10%,4x9.8mm	
LG11	2701-001065	INDUCTOR-AXIAL	0.22UH,10%,3X7MM	
LR10	2701-000190	INDUCTOR-AXIAL	470nH,10%,4x9.8mm	
LR11	2701-001063	INDUCTOR-AXIAL	150nH,10%,3x7mm	
MP1.0	BH41-00225A	PCB SUB	AN19JS/LS VIDEO,PHENOL,1.6T*247*330MM,TP17LT	
R104	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R110	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R115	2001-000022	R-CARBON(S)	33OHM,5%,1/2W,AA,TP,2.4X6.4MM	
R151	2001-001098	R-CARBON(S)	100MOHM,5%,1/2W,AA,TP,2.4X6.4MM	
RB03	2001-000766	R-CARBON	43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RB08	2001-000938	R-CARBON	68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RB09	2001-000643	R-CARBON	330KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
RB11	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
RB12	2001-000705	R-CARBON	39OHM,5%,1/2W,AA,TP,3.3X9MM	
RG03	2001-000766	R-CARBON	43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RG08	2001-000938	R-CARBON	68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RG09	2001-000643	R-CARBON	330KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
RG11	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4MM	
RG12	2001-000705	R-CARBON	39OHM,5%,1/2W,AA,TP,3.3X9MM	
RR03	2001-000766	R-CARBON	43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR08	2001-000938	R-CARBON	68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR09	2001-000643	R-CARBON	330KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
RR12	2001-000705	R-CARBON	39OHM,5%,1/2W,AA,TP,3.3X9MM	
SK104	1405-001064	SURGE ABSORBER	400V,20%,-,-,AXIAL	
SK108	4715-001055	SURGE ABSORBER	1kV,+50-10%,-,-,RADIAL	
SKB01	4715-000102	SURGE ABSORBER	200V,20%,1000A,-,RADIAL	
SKG01	4715-000102	SURGE ABSORBER	200V,20%,1000A,-,RADIAL	
SKR01	4715-000102	SURGE ABSORBER	200V,20%,1000A,-,RADIAL	
ZD102	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD103	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	
ZD104	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,500mW	

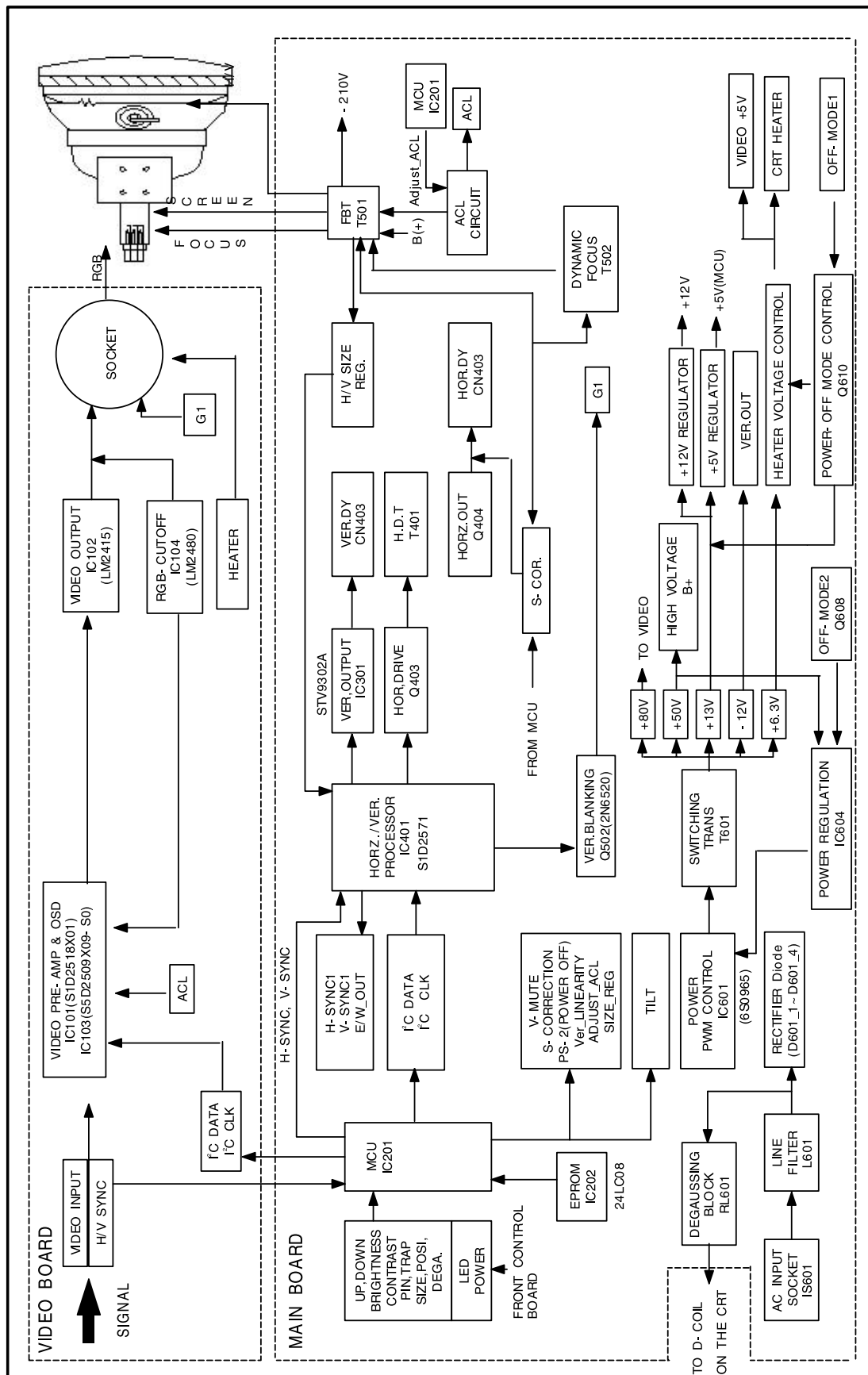
7-3 Others

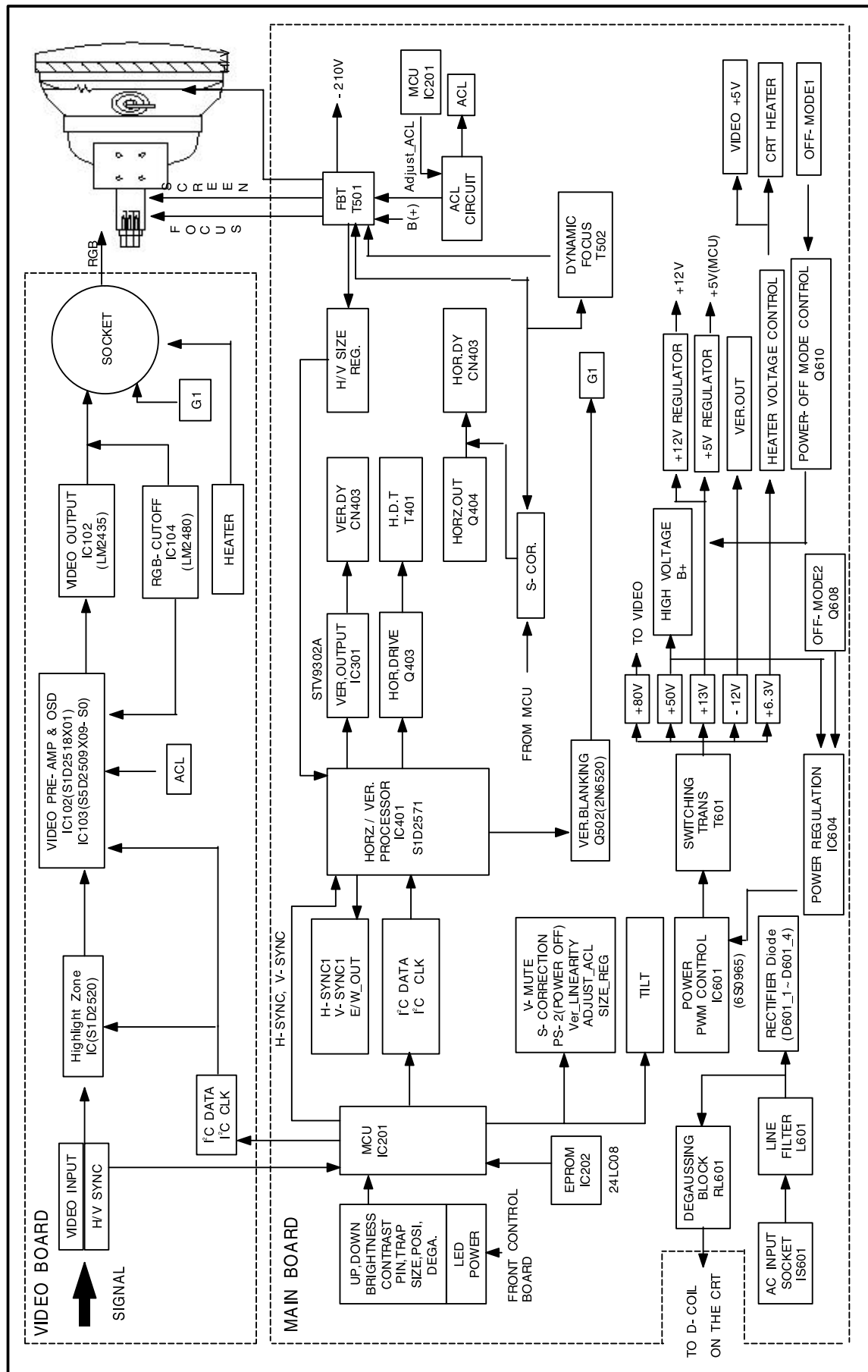
Loc. No.	Code No.	Description	Specification	Remarks
-	BH90-00257F	ASSY STAND	AQ19JS,ABS HB,IV16	SNA
CIS	BH75-00335B	UNIT-STAND ASSY	AQ19JS,-,ABS HB,-,IV16,-,-	
CIS	BH61-00019A	SPRING ETC-CS(STAND)	DP15LS,STS304-WPB,1.0,6,22,20,8,-,-,-,-	SNA
CIS	BH61-40002A	FOOT-RUBBER	-,NR,PMS428U,GA4237,-,-,-	
CIS	BH63-30103A	FELT-STAND	MCM1755,FELT,T1.0,W10,L4	
CIS	BH68-20366A	LABEL-MARK STAND	-,ART PAPER 100(S),-,-,-,-,WHT,-,-	SNA
CIS	BH68-70306A	CARD-STAND	CVM4967PWS(SKD),WONSTROW,CHAIN	SNA
CIS	BH69-30348C	BAG-PE	HDPE,T0.02,W350*L430,Y,-,CGB51	SNA
CIS	BH72-00093A	STAND-BASE	PG19NS,ABS HB,IV16	SNA
CIS	BH72-00278A	STAND-TOP	PN19LT,ABS,HB,IV16	SNA
-	BH90-00339A	ASSY COVER REAR	AQ19LS,ABS HB,IV16	SNA
CIS	BH72-00349A	COVER-REAR	AQ19JS,ABS,HB,IV16	
-	BH90-00563A	ASSY COVER FRONT	CA19JS,CA19JS-09E5/0503	SNA
C/F+C/R	6003-000009	SCREW-TAPTITE	BH,+,B,M4,L16,ZPC(YEL),SWRCH18	SNA
C/F+CDT	6006-001119	SCREW-ASS'Y TAPT	WC,BH,+,M5,L25,ZPC(YEL),SWRCH18A	SNA
C/F	BH96-00140A	ASSY COVER P-FRONT	CA19JS,ABS HB,IV16	
C/F	6003-000010	SCREW-TAPTITE	BWH,+,B,M3,L10,ZPC(YEL),SWRCH1	
C/F	6107-001036	SPRING-CS	PI9.4,D0.6,L15,WHT,STS304WPB	SNA
C/F	BH59-00271A	PBA SUB-FUNCTION	AQ19LS,AQ19LS_FUNCTION,-,-,-,-,-	SNA
C/F	BH64-00046A	KNOB-POWER	DF17JS,ABS,-,-,-,HB,IV16,-,-	SNA
C/F	BH64-00077A	KNOB-SPACER	PN19JT,ABS,HB,IV16	SNA
C/F	BH64-00097A	KNOB-FUNCTION	AQ17IS,ABS,HB,IV16	SNA
C/F	BH67-00019A	LENS-LED	PN19JT,ACRYL,CLEAR,-,-,-,-	SNA
C/F	BH68-00493A	LABEL	MAGICBRIGHT,PE CLEAR,T0.05,29,23,CLEAR	SNA
C/F	BH68-20026B	LABEL-MARK TC095	-,-,PE CLEAR,T0.05,TRP,BLU/GRN/YEL/RED/BLK,-,-,-	SNA
C/F	BH71-00121A	EARTH PLATE	PN17LT,SUS304,T0.15	SNA
C/F	BH71-00145A	EARTH PLATE-TOP	AQ19FS,STS301,T0.15	SNA
C/F	BH71-00146A	EARTH PLATE-SIDE	AQ19FS,STS301,T0.15	SNA
C/F	BH72-00350A	COVER-FRONT	AQ19IS,ABS,HB,IV16	SNA
C/F	BH72-60491B	CAP-BOSS	CGK5517,TPE,80,GRAY,CDT SETTING	
C/F	BH73-00022A	RUBBER-CDT	AQ19FS,CR,DIA20*T1.5,-,-,BLACK,-,-,-,-	
-	BH91-00793A	ASSY CDT	CA19JS,CA19JS-09E5/0503	SNA
CDT	0201-001053	ADHESIVE-RBR	DC-3140_RTV#0414,TRP,-,-	SNA
CDT	0203-000005	TAPE-ACETATE	SGT730,T0.26,W19,L3000,BLK	SNA
CDT	3302-000006	MAGNET-RUBBER	AF,14G,1620-1980G,0.58-0.9MGOe	
CDT	3309-000002	MAGNET-SHEET	5x20x80mm,UL94V-0,2	
CDT	BH03-00047L	CDT-SC	M46QCK761X850(T4),84,19,0.25,29.1,IFT,H/C,NH,TCO,TILT,4	
CDT	BH68-30003B	LABEL-HIGH VOLTAGE	CKA4217(C),ART,100G,YEL,BLK,W30*L30,CDT-TUBE	SNA
CDT	BH96-00109A	ASSY D-COIL P	19,BH27-00136A,BH39-00408A	
-	BH91-00805A	ASSY SHIELD	AN19JS	SNA
CIS	BH64-30002A	LOCKER-WIRE	NYLON66,NTR,CMG7377,DARW-60-N,	SNA
CIS	BH75-00280B	UNIT-SHIELD/COVER	PN19LT,-,A1050S H14 T0.3,-,-,-,-	SNA
CIS	BH72-00292A	SHEET ABS-ANODE	PN19LT,PP,NTR,-,V2,-,-,-	SNA
CIS	BH75-00280A	UNIT-SHIELD/COVER	PN19LT,-,A1050S H14 T0.3,-,-,-,-	
CIS	BH71-00106A	SHIELD COVER	PN19LT,A1050S H14,T0.3	SNA
CIS	BH71-00124A	SHIELD COVER-TOP	PN19LT,A1050S H14,T0.3	SNA
CIS	BH71-00127A	SHIELD COVER-BOTTOM	PN19LT,SECC,T0.5	SNA
SH/BTM+SH/COV	6003-000010	SCREW-TAPTITE	BWH,+,B,M3,L10,ZPC(YEL),SWRCH1	

Loc. No.	Code No.	Description	Specification	Remarks
-	BH91-00847A	ASSY CHASSIS	CA19JS,CA19JS-09E5/0503	
HS103	BH99-00004C	ASSY HEAT/SINK	HS VIDEO,SCREW+NUT,LM2435,-,OIL SILICON,-,G746,-,-	SNA
CIS	0205-001027	OIL-SILICON		SNA
CIS	6006-001008	SCREW-ASS'Y MACH	WSP,BH,+,M3,L10,ZPC(YEL),SWRCH	SNA
CIS	6021-000118	NUT-HEXAGON	1C,M3,ZPC(YEL),SM20C	SNA
CIS	BH13-00008A	IC HYBRID	COLOR MONITOR,LM2435,TO-220-9L,9P,CRT DRIVER,60 TO 85V,-	
CIS	BH62-00006A	HEAT SINK-VIDEO	-,A1050S T2.0,-,DB	SNA
-	BH92-00895A	ASSY P/MATERIAL	AN19JS	SNA
P/M	0203-001102	TAPE-OPP MASKING	OPP-2,T0.05,W100,L400M,CLR	SNA
P/M	0203-001159	TAPE-FILAMENT	#8915,T0.15,W12,L55000,CLR	SNA
P/M	BH69-00260A	BAG AIR	DP17L,PE,0.2,1800,1000,NATURAL,-	SNA
P/M	BH69-00368A	CUSHION-L/R	AQ19IS,EPP M45,-,-,-,-,-,-	SNA
P/M	BH69-30002C	BAG-PE	LDPE,T0.05,W2400,NO_PRINT	SNA
P/M	BH69-30348B	BAG-PE	HDPE,T0.02,W1120*L1100,Y,-,CGE	SNA
P/M	BH69-30360A	BAG-AIR	HDPE,T0.2,W1000*L1800,N,-,ALL	SNA
P/M	BH69-40380A	PACKING-PAD	DW-2,500X2200X200,-,CGK5527	SNA
-	BH92-00958A	ASSY BOX	CA19JS,CA19JS-09E5/0503	SNA
BOX	BH68-00329B	LABEL BAR CODE	-,ALL,TCO95,DOMESTIC,ART-PAPER 90G,-,WHT,BLACK,-,-,-	SNA
BOX	BH69-00502A	BOX	S/M955MB,W/W,CB-DW3,YEL,A-1,L620*W545*H510	SNA
-	BH92-00959A	ASSY LABEL	CA19JS,CA19JS-09E5/0503	SNA
LABEL	BH68-00464B	LABEL RATING	AQ19LS@EUROPE,PE,T0.05,90,65,SYNC,-,PE NATURE,-,-	SNA
-	BH92-00960A	ASSY ACCESSORY	CA19JS,CA19JS-09E5/0503	SNA

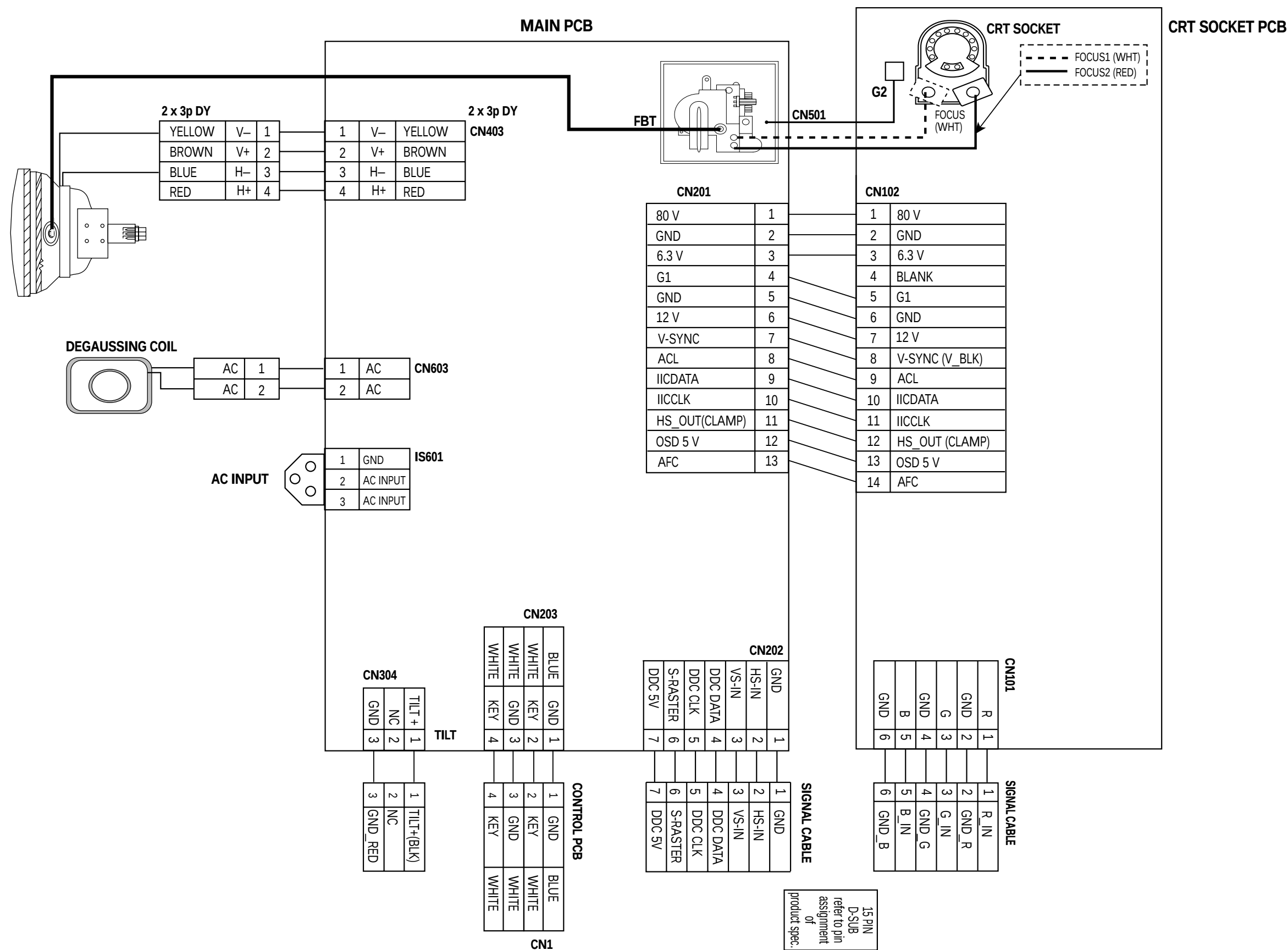
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8 Block Diagrams

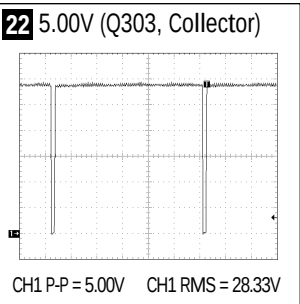
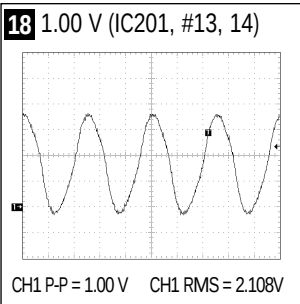
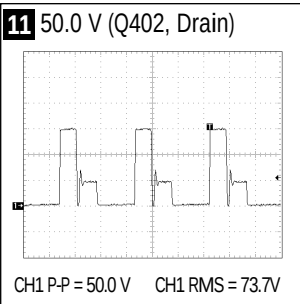
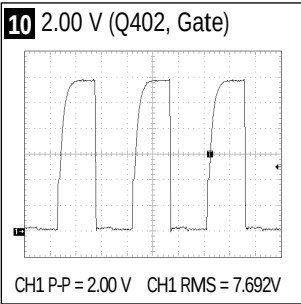
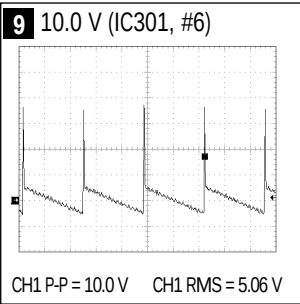
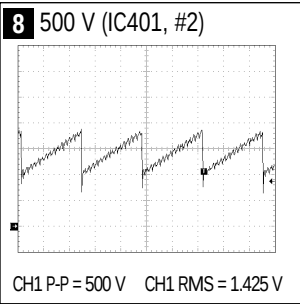
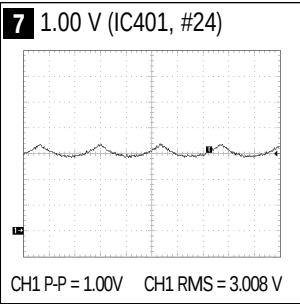
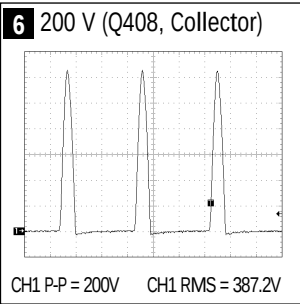
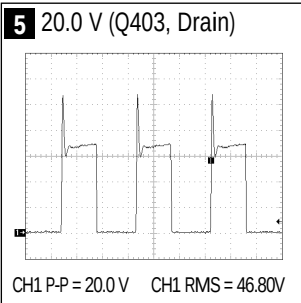
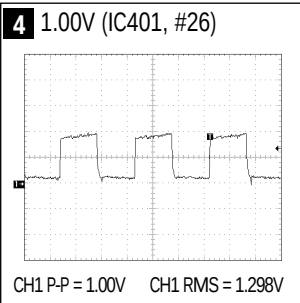
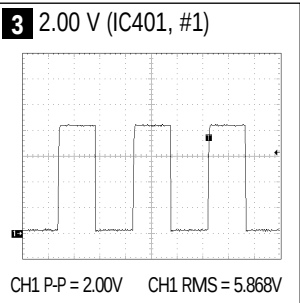
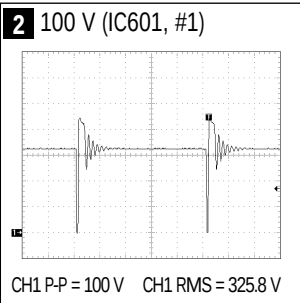
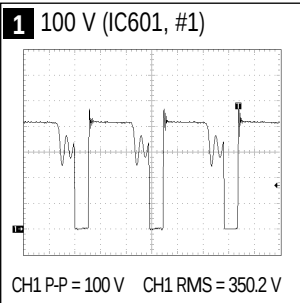


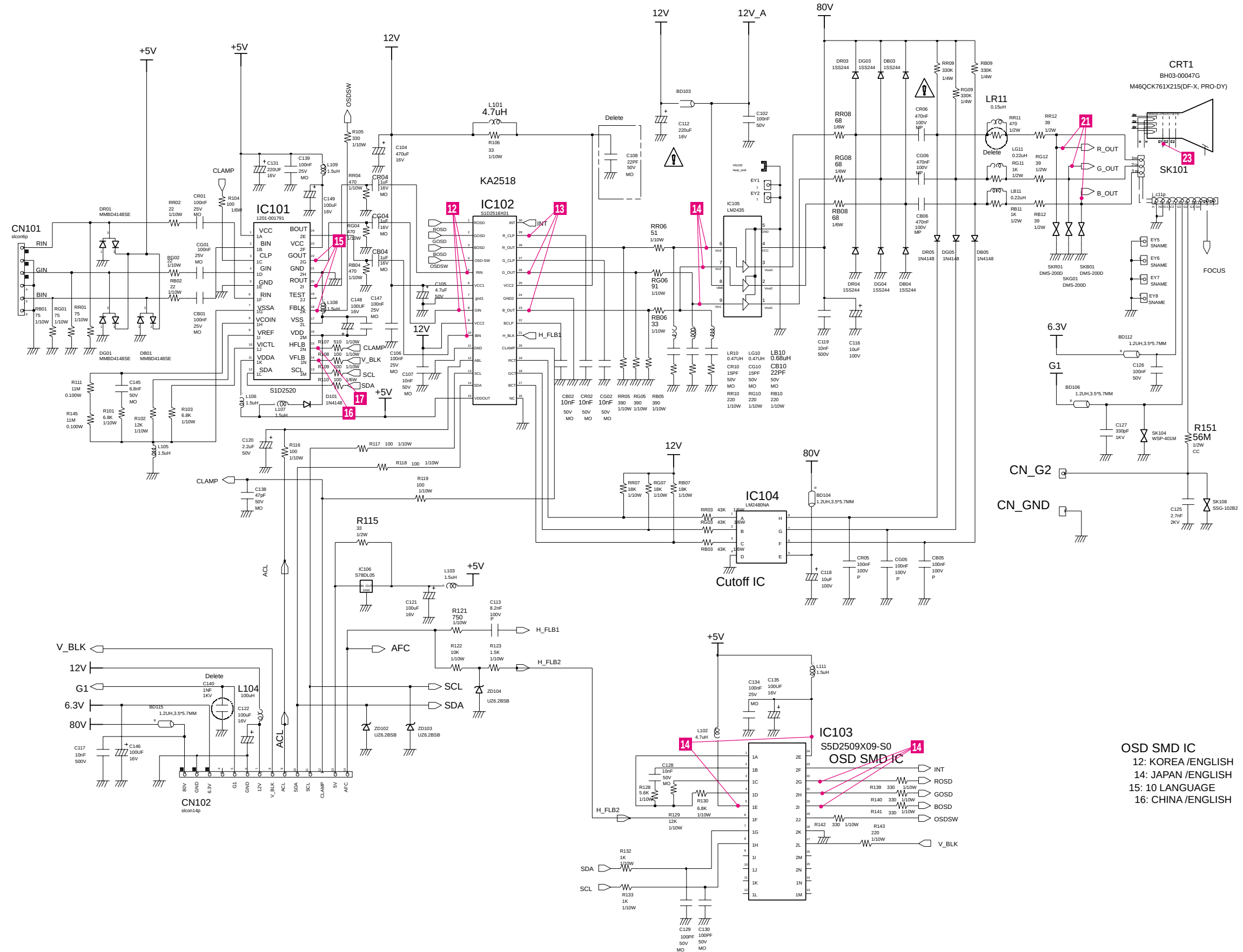


9 Wiring Diagram

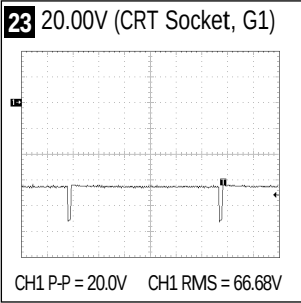
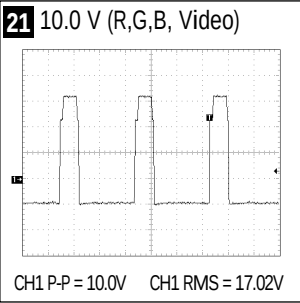
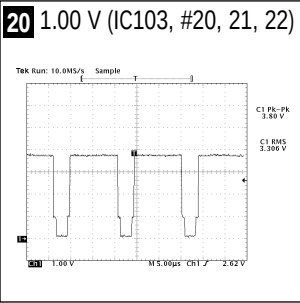
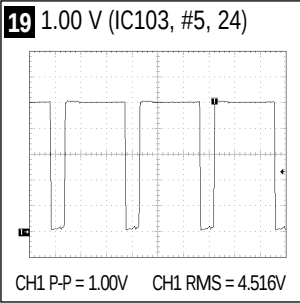
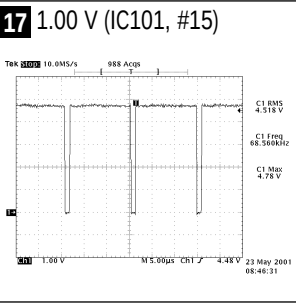
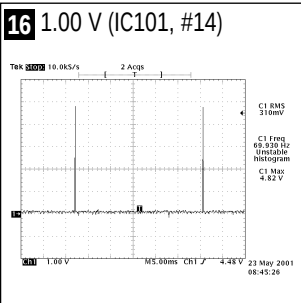
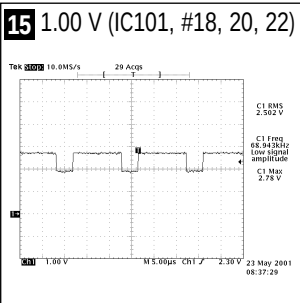
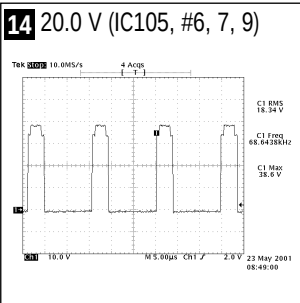
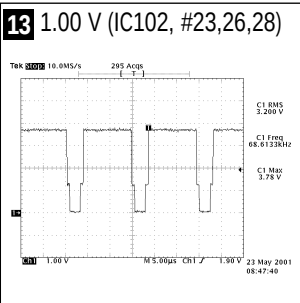
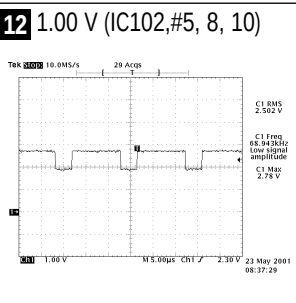


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OSD SMD IC
12: KOREA /ENGLISH
14: JAPAN /ENGLISH
15: 10 LANGUAGE
16: CHINA /ENGLISH



NOTES



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